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ABSTRACT

This annotated bibliography contains 73 citations describing health education programs around the world. Countries represented include: Bangladesh, Egypt, Gambia, Gilbert Islands, Guatemala, Haiti, Honduras, Jamaica, Kenya, Indonesia, Nicaragua, Peru, Philippines, Swaziland, Thailand, Tunisia, Australia, Colombia, India, United Kingdom, Canada, France, United States, Austria, Federal Republic of Germany, Finland, Norway, Belgium, Israel, Greece, and New Zealand. The citations describe the subject of the project, target audience, communication channels, sponsoring agencies, costs, time period, methodology, outcomes, and recommendations. A subject matter index is included. (CB)

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Nutrition Education Series
13

Health Education Intervention

An Annotated Bibliography

Unesco Nutrition Education Programme

Paris

Division of Science,
Technical and Environmental Education

United Nations Educational,
Scientific and Cultural Organization

ED-86/WS/83
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PREFACE

This document focuses on a rarely dealt with aspect of health education, i.e., actual projects. Surprising as it may seem, to the best of our knowledge, no one has heretofore attempted to pull together the literature on health education interventions.

There are two good reasons why a document such as ours never appeared in print before. First, it is only in the past decade that policy makers and planners have begun to take health education seriously, and consequently, there have not been that many significant projects worth analyzing. Secondly, health education is a disparate field touching upon many different health related problems, e.g., cancer, heart disease, mental illness, et al. To try to stay on top of developments in any one problem area is a difficult enough task, let alone to be able to cover the waterfront. Health educators usually operate (rightly or wrongly) within the context of a single disease or set of epidemiological concerns. It takes some doing to piece together the big picture. We have tried to take a first step, based on a limited review of secondary data sources. There is probably much more information available, and we urge interested parties to forward material to UNESCO. We hope to publish occasional updates of this volume.

We also have tried to make this review geographically representative of health education projects around the world. One will find that developed countries have had more experience dealing with the so-called diseases of affluence, e.g., cancer and heart disease, while the developing world has been focused on health-related problems associated with poverty, e.g., diarrheal disease. However, the literature reveals a slowly emerging commonality of approach that transcends environment or problem area of concern.

We hope that health educators in all countries will find this document to be of use.

The ideas and opinions expressed in this annotated bibliography are those of the authors and do not necessarily represent the views of Unesco. The designations employed and the presentation of material throughout the monograph do not imply the expression of any opinion whatsoever on the part of Unesco concerning the legal status of any country, territory, city, or area of its authority or concerning its frontiers and boundaries.

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COMMENTS ON THE STATE OF THE ART

The field of health education has tended to be long on rhetoric and short on application. The literature is filled with the pontifications of theorists and is conspicuously soft-spoken in relation to the work of practitioners. Perhaps this is due to the fact that health education has not been exactly a growth industry and that in reality there are few of us who have been fortunate enough to make a career out of it. That situation is beginning to change, however, as the case studies reviewed here attest. Educational aspects of public health are being given increased attention, as more and more success stories are generated that document the way in which improvements in health-related behavior can successfully be promoted.

The health education case study literature is filled with great promise. Beginning in the 1970s, a number of areas (heart disease, smoking, alcohol and drug abuse) show increased investment in essentially education or communications oriented interventions. These investments began to pay off at the end of that decade in terms of target population behaviors, e.g., reduced cigarette consumption in North Karelia, Finland, or increased numbers of hypertensives who have their blood pressure under control and a lessening of stroke deaths in the U.S.A.

However, the case study literature is also frustrating. Data is often fragmentary; reporting often focuses on types and quantity of material produced without commenting on the development process or the impact on the target audience. There is little discussion of how audiences were segmented, knowledge, attitude, and behavior change objectives identified, messages defined, or interventions managed. Cost information is rarely provided, and cost effectiveness issues never discussed.

This volume reviews articles about both very small-scale as well as massive interventions. It does so almost indiscriminately, in part because many of smaller projects are extremely interesting, but also because there has just not been that much for us to choose from. Many of the articles describe school-based interventions, particularly in the areas of alcohol, smoking, cardiovascular, and cancer education. We had hoped to include more examples of mass media focused interventions, but unfortunately much of the work done to date in mass media health education has been in the form of ad hoc public service announcements (PSAs) whose impact has not been evaluated.

Despite its lack of detail in regard to process, the literature on health education projects over the last decade is filled with lessons learned related to the structuring of interventions which are important for planners and future practitioners to know. The old axiom of the need to send messages through multiple channels of communication (mass media and interpersonal) in order to maximize impact, applies to many of the studies reviewed here. What emerges as a new factor here is the principle of networking, of systematically organizing reinforcing layers of program support groups (doctors, nurses, community health workers, broadcasters, volunteer constituencies) to transmit messages and materials, and provide needed supportive services (logistical, technical, emotional). A major factor in the success of many of the larger-scale programs, e.g., the United States High Blood Pressure Education Program, appears to be the ability to organize and make use of support networks.

The need for greater long-term planning and implementation of health education projects is another major lesson learned. We are tempted by the flashiness of television and radio to expect great things from an investment in a mass media blitz; but over and over again, we learn the lesson that media, by itself, especially in short-term situations, can do little more than raise awareness. In fact, most health education, no matter what their communication focus, are severely contrained if budgeted for only a short period of time (most of the projects reviewed in this volume unfortunately fall into that category, six weeks to two years). Deliberate multi-year strategies seem to work best, i.e., programs that identify a series of short- and long-term objectives and utilize an appropriate mix of educational and communications techniques, formative research, and networking activities to reach their goals. It seems to take a sustained intervention (ideally, a ten-year period) to effect long-lasting change in health-related behavior.

The concept of "risk reduction" continually asserts itself as an entry point for an educational intervention. Certainly this is true in the heart disease area, as the "Review of Hypertensive Control Programs in Occupational Settings" by Alderman, Green, and Flynn (45)* indicates. Smoking, obesity, and other high risk factors, as identified through preliminary screenings, become convenient starting points for promotional efforts aimed at behavior change. The World Health Organization European Multifactoral Preventive Trial of Coronary Heart Disease focused on these and other high risk factors with favorable results, as did the Stanford Heart Disease Prevention Program. The identification of high risk populations facilitates an answer to the problem of target audience segmentation. Involving high risk communities in the process of setting their own health-related goals for behavior change is another strategy that appears to have worked in a variety of settings (e.g., alcohol abuse education programs in France, or the Austrian National Campaign on smoking attitudes and practices, 1981-1984).

The burden of peer pressure is a common theme that many health education projects struggle to address. This is particularly true of smoking and alcohol and drug abuse programs aimed at adolescents, e.g., several of which are highlighted in the review article "Preventing Substance Abuse: The State of the Art," by Durell and Bukowski (35). Strategies that have been evolved to deal with this problem include the use of peer group opinion leaders as positive role models, "say no" programs wherein students are trained to resist enticements from peers and the media, and values clarification programs where adolescents are taught to evaluate peer pressure in light of their own standards.

Incentive-related programs appear to have had considerable success with all levels of the population. The Dow Chemical Company offered workers at its Texas plant one chance to win a motor boat for every month of nonsmoking. A diarrheal disease control program in the Gambia used a lottery prize system to reward mothers who successfully could prepare home-based oral rehydration therapy. Participants in a German smoking cessation program lose money if they fail to live up to the terms of a contract to stop or reduce their cigarette consumption. These three programs and others have used a reward/incentive as a means of encouraging participants to attain specified behavior change goals.

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*Numbers in text refer to entries in the annotated bibliography, not page numbers.

In mass media focused programs we seem to be in need of more research-based approaches. Oral rehydration projects in Honduras and the Gambia are models in this regard in that they provide with an extensive data base on such important variables as target audience knowledge, attitudes, practices, and health status, media usage and post campaign morbidity, mortality, and behavioral outcomes. However, these two programs, both extensively financed, are more the exception than the norm. Many mass media health education efforts suffer from underexposure primarily due to lack of access to sufficient broadcast time, as Maloney and Hershey point out in their article on the "Findings of the 1982 U.S. Alcohol Abuse Prevention Campaign" (34). Without sufficient reach and frequency, it is difficult to gauge the effectiveness of mass media messages and materials.

The trends seem to be towards integrated approaches in school-based programs. At all levels, common themes are integrating the teaching of preventive health into ongoing curriculum programs; beginning preventive education at an early age and adding increasing layers of knowledge and skill as children progress through school; and an emphasis on experiential learning, health care decision-making, and values clarification. One of the conclusions of Iammarino and Weinberg's article on "Cancer Prevention in the Schools" (56), is that school districts should provide a comprehensive coordinated cancer education curriculum involving several disciplines, such as science, home economics, physical education, and health.

The difficulty of promoting preventive health practices is stressed in much of the literature. G.S. Smith's position paper on Accident Prevention (73), claims that interventions that deal almost entirely with the pre-event phase of accidents have had little success. Interventions directed at the event and post-event phases--for example, teaching people to put cold water on burns or to perform CPR--are suggested as having more potential for injury control. Preventive education seems to require more resources, extensive support, and implementation time in order to be successful, particularly among adult populations.

Much more research needs to be carried out to understand the relationships between knowledge, attitudes, practices, and behaviors. Many programs with knowledge or awareness outcomes have failed to have an impact on related health practices. After reviewing the literature, one wants to know whether any principles of causality can be established between degree of knowledge, degree of awareness, and degree of practice; and between degree of practice or skill proficiency and health life style.

The literature raises more questions than it answers, but rightly so. For it is only in the past two decades that we have come to realize the role that large-scale education and communications programs can play in changing health behavior. In that regard the articles reviewed here reflect health education's infancy. Much can be learned from the lessons of their experience and the fact that they have been as successful as they have at such an early age.

Ronald C. Israel
Education Development Center, Inc.
September, 1985

DIARRHEAL DISEASE

1. **Hoff, Wilbur, "Overcoming Barriers to Sanitary Improvements: A Primary Health Care Project in the Gilbert Islands", International Quarterly of Community Health Education, Vol. 3, #2, 1982-83, pp. 195-201.**

Subject:
A health education campaign to promote the building of wells and latrines on the Gilbert Islands.

Target Audience:
Population of the Gilbert Islands (Kiribati).

Channels of Communication:
Inter-personal education (home visits made by trained health aides), visual aids, and broadcasts over Radio Kiribati.

Sponsoring Agencies and Cost:
Kiribati Ministry of Health with support from World Health Organization, UNICEF, and Government of New Zealand. Cost information was not provided.

Time Period:
16 months (consultant time).

Methodology:
A health education campaign was carried out in order to promote the construction and use of latrines and wells. The comprehensive educational intervention included having health aides visit homes and give group discussions using visuals specially designed for Kiribati culture. Inter-personal education was supported by daily broadcasts over Radio Kiribati on the program, "The Voice of Health," which contained health stories and messages backed by local music. Health Committees were formed on each island to promote sanitation projects, and Island Councils and Youth Clubs were involved in local health projects.

Outcomes and/or Recommendations:
No outcomes were mentioned. The author feels the construction of latrines and focus of educational messages has to fit the lifestyle and culture of the Gilbertese in order to promote acceptance. People should be actively involved in all areas of program implementation. The author states the necessity of integrating health education campaigns with sanitation efforts.

2. **Dessé, Ginette, "Utilisation du Serum Oral et Impact de la Politique de Communication du Programme National de Lutte Contre la Diarrhée," Consultant Report for Ministère de la Santé Publique, Haiti, 11/1984.**

Subject:
A campaign to promote oral rehydration therapy (ORT) to control diarrheal disease in Haiti. The article illustrates how factors of time (duration) and message accuracy affect the impact of a communications campaign.

Target Audience:
Mothers and caretakers of children less than 5.

Channels of Communication:
Radio, posters, leaflets, television and medical personal (rural health workers).

Sponsoring Agencies and Cost:
Ministry of Public Health (Haiti), UNICEF and World Health Organization. Cost information not provided.

Time Period:
September, 1983.

Methodology:
ORT packets were locally produced and distributed to clinics, stores, pharmacies and other outlets. Medical personnel and rural health workers were trained in the solution's use and mixture. The radio stations having national coverage (Radio Nationale, Radio Lumière, and Radio Soleil) broadcast messages relative to diarrhea and serum utilization. This was combined with television messages and two different posters that were distributed throughout the country. Pre-project research was undertaken; questions regarding knowledge and attitudes toward diarrhea were posed in focus group interviews.

Outcomes and/or Recommendations:
In a 1984 evaluation, it was noted that there were some problems with message comprehension; many Haitians perceived ORT to be a "medication or treatment" for diarrhea, rather than as a means for treating the dehydrated condition that can arise as a result of diarrhea. No one media was perceived as being able to be used exclusively for message dissemination--the coverage was too limited. Thus, all were needed in a concerted effort. In order of their importance, in terms of reaching most people, channels of communication were: medical personnel (especially rural health agents), radio, television and posters. Television was only effective in urban areas.

3. **Foote, Dennis R. et al.** **The Mass Media and Health Practices Evaluation in the Gambia: A Report of the Major Findings**, Applied Communication Technology Inc., Menlo Park, Cal., 1985.

Subject:
The project focused on promoting the use of a home-based oral rehydration therapy for treating and preventing infant diarrhea and on using mass communication in conjunction with existing health services in an integrated campaign.

Target Audience:

- Rural mothers, grandmothers, and older female siblings of children under 5.
- Rural Health Inspectors, Community Health Nurses, Peace Corps Volunteers, and other primary health care workers.
- General physicians, local leaders, and rural fathers of children under five.

Channels of Communication:
Radio, print materials, health worker training, and national rural lottery.

Sponsoring Agencies and Cost:
Gambian Ministry of Health, Academy for Educational Development. Cost information was not provided.

Time Period:
24 months, 1982-1984.

Methodology:
The Gambia project was divided into a 6-month pre-program development investigation, then implementation, monitoring and adaptation of the public education program. The campaign utilizes radio, a color-coded printed flyer (for a largely illiterate target audience), and trained health workers to stress the following messages: how to mix the oral rehydration solution, to continue breastfeeding, to administer the solution along with breastmilk during dry season diarrhea, to seek outside assistance if the child shows serious signs of dehydration, to clean the household--particularly of feces. Radio spots, mini-programs and magazine format programming delivered a seasonally structured series of messages to promote oral rehydration solution, to identify health workers, and explain the flyer. A national rural "happy baby" lottery was used to motivate rural women to learn how to mix the solution. Prizes were given to lottery participants who could successfully mix the Oral Rehydration solution. Traditional Birth Attendants in rural areas were trained to provide support for mothers in preparing the solution. Radio also used to promote a feces clean-up campaign; Islamic principles of cleanliness during prayer sessions were utilized. Radio messages were done in both Wollof and Mandinke, as well as French. At the community level, red sashes were hung on the houses of families who could assist others in the preparation and use of ORT.

Outcomes and/or Recommendations:
There was good access to all the communication channels used by the campaign, and the target audience was heavily exposed to campaign messages through those channels. This exposure resulted in learning gains across virtually all the topics covered by campaign messages. The target audience adopted the promoted behaviors at high rates and sustained the behavior changes over time at high enough rates and with sufficient accuracy that an impact on health status could be expected. For example, the percentage of cases among the sample population that were treated with water-sugar-salt solution rose from 3.6% in the first measurement period to 49.4% in the twelfth. However, the nutritional status of children in the target area worsened over time in relation to the drought and the worsening economic situation.

4. **Foote, Dennis R., et al.** **The Mass Media & Health Practices Evaluation in Honduras, Applied Communication Technology Inc., Menlo Park, Cal., 1982.**

Subject:
The study evaluated the results of the PROCOMSI project, a three-year project to introduce oral rehydration therapy (ORT), using a pre-packaged solution, and other behaviors related to the treatment and prevention of infant diarrhea in rural Honduras.

Target Audience:

- Rural mothers/grandmothers with children under the age of 5, and primary health care workers called "guardianes."
- Secondary audience of physicians, nurses, midwives, fathers, rural school teachers and school children, and regional health promoters.

Channels of Communication:
Radio, print materials (posters, flyers, packets) and trained village-level health workers.

Sponsoring Agencies and Cost:
Honduras Ministry of Health and Academy for Educational Development. Cost information was not provided.

Time Period:
3 years.

Methodology:
The project took place in Health Region No. 1 of Honduras, and was divided into two main phases: a 9-month preliminary research activity (collection of existing data, focus group and individual interviews, observation, visits to rural clinics, and interviews with rural health care workers), and the actual implementation and evaluation phase. The PROCOMSI intervention used broadcast, print, and interpersonal communication channels to deliver a set of messages about a fairly narrow set of issues--response to infant diarrhea.

Outcomes and/or Recommendations:
The evaluation design included a number of studies with different methodologies but relied primarily on large-scale survey data from repeated visits to a panel of mothers of small children. Within six months of the start of broadcasting, over a third of mothers (36.7%) said they had tried ORT solution (Litrosol in Honduras) to treat their children. The percentage rose to 62.4% by the end of the intensive campaign. In a small observational sub-study, most mothers were observed to mix the ORT solution correctly.

An analysis of mortality data, collected from official death registries, showed marked declines in death involving diarrhea in any way. In the two years prior to the campaign, deaths of children under five involved diarrhea in 39.8% of the cases. In the two years after the start of the campaign, deaths involving diarrhea fell to 24.4% of all mortality, a statistically significant drop.

5. Isely, Raymond, "Focusing Sanitation Programmes on Mothers and Older Siblings of Small Children", Tropical Doctor, July 1984, Vol. 14, pp. 136-139.

Subject:
Summary observations based on the the author's experience with sanitation education programs worldwide.

Target Audience:
Mothers and other caretakers of children.

Channels of Communication:
It is best to work through channels already available and accepted in the community. These might include radio, posters, or inter-personal discussion wherever mothers and young girls gather (health centers or schools, meetings of village health committees, women's associations, or the marketplace). Major attention should be focused on mobilizing target groups within the context of a community support structure, rather than on a one-to-one basis.

Sponsoring Agencies and Cost:
The author feels sanitarians, health inspectors, health educators and community health workers can implement this program. Cost information was not given.

Time Period:
No specific time set for the educational program. Author feels that after 2-3 years of consistent training, children aged 5 years would be accustomed to latrine use.

Methodology:
The author feels that sanitation, i.e., excretia disposal programs should focus on the training of small children because defecation habits, once ingrained, are likely to remain and be transferred to future generations. He recommends that child-sized latrines be promoted, and that mothers and caretakers be the main target audience, since they "train" infants under age 18 months to 5 years. He recommends mobilizing community groups of mothers and caretakers to demonstrate how to provide soap and water for washing child after defecation, use diapers on toddlers, work with children aged 18-24 months on latrine-use habits. The central theme is to be that children's stools are dangerous and to be avoided in order to prevent diarrhea.

Expected Results:
Children accustomed to using latrines and continue the practice into adulthood; mothers who develop new habits of child care that are passed on to subsequent generations.

6. Tonon, Marilyn, "Concepts in Community Participation: A Case of Sanitary Change in a Guatemalan Village", International Journal of Health Education, Oct. - Dec. 1980, Issue #4, Vol. XXIII, Supplement.

Subject:
A sanitation education campaign within the context of a community development program in Guatemala.

Target Audience:
Population of 300 families in village of Guanagazapa, Guatemala.

Channels of Communication:
The project took place in the overall context of a community development program. Little stress was placed on one-to-one teaching or home visiting. Rather, the focus was on small and large group activities and discussion, together with the training and utilization of opinion leaders to diffuse information. Certain audio-visual aids were produced and utilized, including posters and pamphlets with life-like cartoon characters.

Sponsoring Agencies and Cost:
The University of North Carolina and the Institute of Nutrition for Central America and Panama (INCAP) with funding from USAID. Cost information was not provided.

Time Period:
Approximately 18 month educational effort.

Methodology:
In terms of sanitation education, the main effort concentrated on household discussion forums. These were small group meetings held in the homes of members of the Guanagazapa Betterment Committee. Participants were trained in principles of sanitation education. Practical demonstrations of latrine maintenance and hand washing were carried out. Visual aids were used that dealt with the subjects of latrines, safe water usage and animal barriers. The aids were developed by the villagers. School teachers also used the aids for classroom teaching.

Outcomes and/or Recommendations:
Approximately 25% of village families participated in the forums. A cooperative was formed based on community participation in efforts to improve sanitary conditions.

7. **Proceedings of the International Conference on Oral Rehydration Therapy, June 7-10, 1983, Washington, DC, Agency for International Development, in cooperation with ICDDR/B, UNICEF and WHO.**

Overview:
This Conference brought together health educators and decision-makers from around the world to exchange information about the state of the art of oral rehydration therapy. Country-level reports on ORT health education projects were presented from Egypt (Rural Health Delivery Project), Guatemala, Bangladesh, Philippines, Nicaragua, Indonesia, Tunisia, Brazil, Jamaica, Thailand, et al.).

8. EGYPT

Subject:
A health education project to promote diarrheal disease management in a target population in a low income target population.

Target Audience:
Family members having children under 5.

Channels of Communication:
Home visits, public meetings (as at mosques) at regular intervals.

Sponsoring Agencies and Cost:
Ministry of Health, Egypt. Cost information was not available.

Time Period:
May 1 - October 31, 1980.

Methodology:
A diarrheal disease knowledge, attitudes, and practice (KAP) study was carried out among a target population of families with 29,000 children under 5. Their health education was provided on diarrheal disease recognition and management, and preparation and use of ORT. Health facility staff were also trained in home management of diarrheal disease.

Results:
Post-test household surveys showed an increase in mothers' knowledge regarding the preparation and use of ORT. Child deaths from diarrhea were fewest in the villages where ORT was available.

9. GUATEMALA

Subject:
An oral rehydration therapy health education project carried out within the context of a primary health care program in eastern Guatemala.

Target Audience:
Families with children aged under 5.

Channels of Communication:
Community voluntary health workers (SINAPS); posters.

Sponsoring Agencies and Cost:
SINAPS (the primary health care system in eastern Guatemala). Cost information was not provided.

Time Period:
Information not available.

Methodology:
ORS packets were distributed at the household level by community voluntary health workers (health promoters) who also taught the mothers about diarrhea and how to prepare oral rehydration solution (ORS). Informational materials, including posters were developed. Motivational themes concentrated on warning parents about the danger associated with diarrhea, then information was provided on oral rehydration treatment.

Results:
One year after intervention, two-thirds of the mothers knew how to use ORS; of the rest, two-thirds knew how to prepare it, but not how or when to use it.

10. BANGLADESH

Subject:
A door-to-door home visit campaign to promote ORT.

Target Audience:
Mothers of children 0-5 years.

Channels of Communication:
Inter-personal (female oral replacement workers [ORWs]).

Sponsoring Agencies and Cost:
Bangladesh Rural Advancement Committee (BRAC). Budget for 3 years: $2.3 million.

Time Period:
12 months (pilot phase); 3 years in 5 districts.

Methodology:
Female ORWs, working in teams, make home visits and converse face-to-face with mothers about diarrhea and ORS. ORWs then demonstrate how to prepare and give the solution. Teaching sessions take 35 minutes. Village meetings held with men reinforce the ORS education. Male team coordinators also organize school campaigns as well as meetings with local healers to convince them of the efficacy of ORS. Monitoring is carried out at the field level on a constant basis.

Results:
The program was successful in teaching Bangladesh women to use ORS for diarrhea; the women retained the information 6 months after being tested the first time. There have been some problems regarding acceptance and usage rates--mainly due to people's perceptions that diarrhea was a "normal" phenomenon.

11. PHILIPPINES

Subject:
A health education and networking effort to promote the use of the ORS Oresol.

Target Audience:

Channels of Communication:
Modules, posters and pamphlets on ORT; local materials; radio and television; volunteer health workers and doctors/paramedics, rural health midwives.

Sponsoring Agencies and Cost:
Ministry of Health. Cost information was not provided.

Time Period:
As of 1983, the program had been in effect 2 years.

Methodology:
A national committee headed by the Ministry of Health created a national task force to oversee the program. Training was held for regional trainers and then duplicated down to the barangay level. IEC materials such as posters and pamphlets were designed and mass-produced. Radio and television were also used. Village health workers collaborated with midwives in teaching families, distributing ORS packets and conducting follow-up activities.

Results:
ORT services are now delivered on a national level. However, there were problems with both the packaging and taste acceptability of Oresol (ORS). Researchers have found communities using Oresol for health problems other than diarrhea.

12. NICARAGUA

Subject:
A nationwide campaign to introduce ORT as a means of controlling diarrheal disease.

Target Audience:
National audience (everyone).

Channels of Communication:
Auxiliary infirmary personnel; audio-visual and written materials; radio and television; comic strips in literacy bulletins.

Sponsoring Agencies and Cost:
Program for the Prevention and Treatment of Diarrhea and Dehydration of the Ministry of Health with funding support from UNICEF. Cost information was not provided.

Time Period:
In effect since 1979.

Methodology:
Popular participation was a keystone of the project; this was done mainly by formation of community Oral Rehydration Units and mobilization of People's Health Councils. A half-hour radio program about diarrhea was produced and incorporated into the national radio program on literacy which is broadcast on a trimestrial basis. Forty-second bulletins were also broadcast and highway signs with the same message were posted throughout the urban areas. An eight-minute program demonstrating ORT was produced for television and aired when the television audience was greatest, in the early evening. A four-page comic strip was used in the newspaper which can be detached to create its own brochure. An audio-visual slide show, shown by health workers, has been utilized in various areas of the country. Maternal and Child Health Care workers have been trained to instruct families on the preparation and use of ORT, and supervise the operation of the community ORT units.

Results:
There has been an increase in popular acceptance and use of oral rehydration therapy, and a decrease in in-hospital mortality in all infant groups has been recorded.

13. INDONESIA

Subject:
A campaign to promote breastfeeding and ORS solution as ways to prevent and treat children with diarrheal disease.

Target Audience:
Mothers of children under 5.

Channels of Communication:
Village health workers; doctors and nurses; radio, television, and newspapers; social groups of people.

Sponsoring Agencies and Cost:
Diarrheal Disease Control Program, Ministry of Health. Cost information was not provided.

Time Period:
Begun in 1974.

Methodology:
Health education encouraged mothers to breastfeed children with diarrhea and to provide them with Oralit (ORS). Through mass media, mothers were encouraged to keep packets of Oralit in their homes. Community groups, such as Farmers Group, Radio Listeners Group, etc., also were used as vehicles for promoting Oralit.

Results:
After an evaluation 48.5% of mothers knew about ORS but only 42.7% knew about its benefits; and only 14.5% of them actually used it. 69.3% of the mothers continued to breastfeed a child with diarrhea.

14. TUNISIA

Subject:
A diarrhea disease control program that focused on doctors and pharmacists as major channels of distribution for ORS packets.

Target Audience:
Mothers of children less than 5; medical personnel.

Channels of Communication:
Mass media, interpersonal education, and support materials.

Sponsoring Agencies and Cost:
Ministry of Health Diarrheal Disease Control Program with support of World Health Organization. Cost information not provided.

Methodology:
Health education was carried out by means of radio, television, and press, as well as through community-level meetings with local political and religious

leaders, womens' organizations, etc. The message themes revolved around preventive rehydration, promotion of breastfeeding, and hygiene. Visual aids were also produced for training sessions. The Ministry of Health provided communities with posters that explained how to prepare and use ORS. Medical training for doctors and pharmacists was also provided.

Results:
There has been a decrease in the number of complaints of diarrhea, as well as the number of hospitalizations caused by dehydration. The number of ORS packets prescribed by pharmacists has increased over the length of the program. However, some doctors and pharmacists have not collaborated with the program, and this has been a hindrance to more widespread use of oral rehydration treatment.

15. JAMAICA

Subject:
A health education program to promote community use of ORS packets.

Target Audience:
Parents bringing children to a center for treatment.

Channels of Communication:
Face to face, pamphlets, posters, radio, and videotapes.

Sponsoring Agencies and Cost:
Ministry of Health. Cost information was not provided.

Time Period:
Begun in 1979; still ongoing.

Methodology:
Educational messages were provided to small groups or to parents as individuals. The Ministry of Health produced two pamphlets for use by health workers: "What to do when your child has diarrhea" and "How to keep you and your baby healthy," as well as posters showing signs of dehydration and how to mix ORS. An eight-part series of five-minute radio programs were aired on national radio. Two videotapes were developed for use by high school students.

Results:
There has been a reduction in the case fatality rate and a decrease in admissions to the hospital. Some misuse of ORS has occurred at health centers where patient load is greatest. Greater health worker-parent communication at these centers and closer monitoring is recommended.

16. THAILAND

Subject:
A mass media campaign, supported by maternal and child health centers, to promote oral rehydration treatment.

Target Audience:
Mothers with children under 5; health workers.

Channels of Communication:
Mass media (radio and TV); support materials (leaflets and posters); and interpersonal education (health workers).

Sponsoring Agencies and Cost:
National Control of Diarrheal Diseases Program. Cost information was not provided.

Time Period:
Begun in 1979, revised in 1980

Methodology:
Information on oral rehydration treatment was disseminated through health facilities in the form of leaflets and posters, and through radio and television. The program has also been integrated into maternal and child health care activities of the Ministry of Health. Information on hygiene, weaning, and breastfeeding have been disseminated to mothers along with advice on diarrhea control.

Results:
The incidence of mortality due to diarrheal disease has declined. Improved training of health workers in home use of ORS packets is recommended, along with more extensive use of radio and television to disseminate oral rehydration therapy messages.

17. BANGLADESH

Subject:
A program to test market Orosaline (an ORT packet mix) in pharmacies in Bangladesh.

Target Audience:
Pharmacists in eight locations: Sylhet, Barisal, Mymensingh, Rajshahi, Munshiganj, Bagerhat, Lalmanirhat, and Lakhipur.

Channels of Communication:
Interpersonal door-to-door salesmanship. Medical and quasi-medical outlets (pharmacies); pharmacists.

Sponsoring Agencies and Cost:
Carried out by Population Services International. Cost information was not provided.

Time Period:
Last three months of 1983.

Methodology:
The existing social marketing program promoted the use of Orosaline, an ORT solution, through pharmacies. No advertising was done, and mass media was not

used. During the three months, of the entire amount sold, 36% was through restocking, which was considered a very good product movement in the absence of advertising.

Results:
It was concluded that a mass communications campaign would be necessary to reach the lower socio-economic groups. Pharmacists did play a significant role in disseminating information on ORT, even to literate consumers. Care must be taken with messages, as some mothers misinterpreted mixing instructions.

18. EGYPT

Subject:
An ORT promotion program through both public health centers and the private sector (pharmacies and doctors).

Target Audience:
Mothers of children under 3 years of age, particularly those of low socioeconomic status.

Channels of Communication:
Interpersonal education; mass media (television and radio commercials); support materials (lapel buttons for dehydration center staff, calendars, videotape intended for physicians, resource kit for teachers, slide sets, charts, and pamphlets).

Sponsoring Agencies and Cost:
Ministry of Health, John Snow Public Health Group. Cost information was not provided.

Time Period:
1981 to 1987.

Methodology:
Local production of ORT packets was launched with a promotional campaign. Market research looked at folk entertainment and access to radio and television. A large radio and television campaign was developed to show the use and mixing of the solution. Messages were reinforced with jingles and musical lyrics. Printed materials included textbooks, newsletters, pamphlets, leaflets. Conferences and mobile teams were also organized. Project representatives also "sold" ORT to doctors and pharmacists.

Results:
By 1984, 200 health centers were providing ORT to children. The awareness among the general public of ORT and its use had increased substantially (from 1.5 to 87.4% in a sample population). Those using ORT rose from 1% to 30% to 82% at three different points in time. Some problems remain: mass media is not enough without full support and cooperation of physicians and administrators; and community-level monitoring needs to be carried out to insure that mothers mix ORS correctly.

19. PERU

Subject:
A combined campaign to promote ORT, immunization, and family planning.

Target Audience:
Families of children under 3.

Channels of Communication:
Mass media (broadcast and print) and interpersonal support.

Sponsoring Agencies and Cost:
Ministry of Health. Cost information was not provided.

Time Period:
September 1984 to April 1985.

Methodology:
The strategy was to launch a Health Literacy Campaign with the focus on "responsible parenthood." Themes included ORT, family planning, and immunization. ORS packets were produced locally and distributed under the name of Salva-Oral. Printed materials for mothers consisted of a "Health Bag" which held materials, booklets, and a calendar. Radio and TV broadcasts were sequenced and pulsed to coincide with the diarrhea season, and attention was given to decision-maker support by using newspaper articles.

Results so far:
While health education messages and materials have been widely disseminated, the program still needs to insure that supplies are available in areas where Salva-Oral is promoted. More research needs to be carried out to understand existing consumer attitudes toward diarrhea in order to prepare more effective messages.

20. SWAZILAND

Subject:
A combined health education campaign to promote ORT, immunizations, and malaria control.

Target Audience:
Mothers of children subject to diarrhea.

Channels of Communication:
Support materials (poster/certificate, flyers, posters, photonovels for use in schools); mass media (radio); and interpersonal education (health workers and traditional healers).

Sponsoring Agencies and Cost:
Ministry of Health. Cost information was not provided.

Methodology:
Health program includes three main themes: diarrhea treatment, immunization, and malaria prevention. A poster/certificate was produced on ORT for traditional healers while instructional posters were provided to health professionals. Flyers were given to mothers. A nine-month radio campaign on prevention and treatment of diarrhea was used, while a regular radio malaria program discussing the importance of malaria and including interviews with spray teams and community members was continued. Health workers were provided with training relevant to all three campaign issues.

Results:
(Not yet carried out.)

21. KENYA

Subject:
A test market project to explore the feasibility of different distribution channels (public and private) for oral rehydration therapy.

Target Audience:
Child caretakers of children under 5.

Channels of Communication:
Interpersonal, sound trucks, film, billboards, and market demonstrations.

Sponsoring Agencies and Cost:
Ministry of Health and Ciba Geigy. Cost information was not provided.

Methodology:
This study intends to compare alternative methods for distributing and promoting ORS sales. In one area, free packets will be given to health centers, and "minimal messages" will be given to child caretakers and health personnel on diarrhea and breastfeeding. In the comparison area, the same will take place, but there will also be free distribution of Ciba-Geigy salts and an advertising campaign used to promote them.

Results:
Effects will be measured at mid-project through analysis of mortality surveillance data, verbal autopsy reports, and clinic treatment and referral records.

22. Hornik, Robert and Pamela Sankar, Communication for Diarrheal Disease Control, Evaluation of the Swaziland Program 1984-1985, 1985, Academy for Educational Development, Washington, DC.

Subject:
Evaluation of a project to promote home treatment of diarrheal disease in young children in Swaziland.

Target Audience:
Young children and their families.

Channels of Communication:
Mass media, print materials, and face-to-face communication.

Sponsoring Agency:
Ministry of Health, Swaziland, United States Agency for International Development.

Time Period:
April 1984 - March 1985.

Methodology:
The campaign focused on the acceptance of the use of home-mixed sugar-salt solution for the treatment of diarrheal disease, and giving special feedings afterwards; a particular concern was the need to introduce a new formula for mixing water/sugar/salt (of 1 liter of water, 8 soda bottle capfuls of sugar, and 1/2 capful of salt) to replace a previously advocated solution with 1 capful of salt which project medical advisors believed risked toxicity.

The campaign focused on the use of radio programs broadcast on established development programs on the national radio system, printed materials including a flyer with mixing instructions, and posters for display at health clinics, and workshops to train much of the health staff of the country as well as various other extension personnel and local volunteers in treatment of diarrheal disease.

Outcomes and/or Recommendations:
The campaign reached a large proportion of the Suazi nation; nearly 85% of all homesteads were substantially exposed to at least one of the campaign's channels. The campaign succeeded in improving the knowledge of the community about the need to use clean water and the need to feed a child after a diarrheal disease episode. However, 54% of the sample population was still offering a sugar-salt solution with sodium levels above the WHO maximum. (The best explanation for the continual use of too much salt--essentially one cap rather than 1/2 cap--was the difficulty of learning a fraction as part of a formula.)

Another problem area related to the promotion of feeding during diarrhea. 42% of the sample accepted the need for feeding specially during episodes before the campaign; only a few more (53%) accepted the need after the campaign. The evaluators speculate that this small change in response is attributable to a perception by the mother that the advice is inconsistent with common sense or to an actual unwillingness of the child to eat.

The study did not measure health outcomes. However, it did collectinteresting data relating to the power of the campaign to affect health practices. Regression coefficients suggested that a person in contact with an outreach worker (versus not in contact) was about 22% more likely to practice correctly and that a heavy radio listener (versus a non-listener) was about 20% more likely to satisfy the quality of practice criterion. Radio reached 62% of the population and outreach workers only 16%. Given similar effect but far greater coverage by one channel than the other, this is intriguing evidence for a substantial return on investments in radio.

23. Lugo, Orlando and R. K. Rath. "Mobilizing Communities for Mass Immunization," Project Support Communications Newsletter, Vol. 9, no. 1, February 1985.

Subject:
A description of the mass immunization campaign carried out in the district of Bidar, at the southern tip of the State of Karnataha, India. The campaign shows how efforts to organize and mobilize the community need to go on simultaneously to an education/communications effort.

Target Audience:
Mothers of immunization-age children since they have main responsibility for the children. Local community leader groups were mobilized and informed to support the project.

Channels of Communication:
Interpersonal communication using the community change agents (promoters, dias, village family and health workers, members of women's associations). All India Radio broadcast information about the program as well as regional radio station broadcasts. Newspapers, posters, handouts, and banners were also used and loudspeakers attached to jeeps announced immunization sites. Slide shows were prepared for use in schools; street dramas were performed.

Sponsoring Agencies and Cost:
The Bidar program was carried out by UNICEF in cooperation with the Government of India. Cost information was not provided.

Time Period:
Information not given.

Methodology:
The program first worked to secure community participation by carrying out a series of meetings with Bidar officials. A Steering Committee was established at the District level, and sub-committees formed at the primary health center level.

Members of the committees were involved in the planning and strategy sessions for the immunization program; the members visited the communities and discussed with the people the concerns concerning immunization. The village health workers were trained to visit the mothers in house-to-house visits and make them aware of the need for immunization. They advised eligible mothers to take their children to the immunization centers.

These activities were supported by mass media. All India Radio broadcast information about immunization in a regular and established program called "Family Welfare" every day. Other regional radio stations also carried information. Newspapers were also used in a limited fashion; posters were displayed in schools, health centers, pharmacies, and stores. Handouts and banners were distributed. Loudspeakers on jeeps and motorcycles reminded people of the need to immunize their children. Street dramas depicting the subject of immunizations were also carried out by a group from the All India

Radio station. The health workers made visits to homes to dispel any rumors and answer questions related to immunization.

Outcomes and/or Recommendations:
The Bidar program demonstrated that knowledge was not enough to cause people to go for immunization; communities needed to be mobilized to promote participation. The administrators also discovered the need to control negative rumors that concerned immunization. Mobilization of community resources was also needed to ensure that government services would have vaccines available on time, and that measures would be taken to control any side effects that might take place after vaccination.

24. **Black, N. A. "Responses to rubella immunization education in health authority family planning clinics: A controlled clinical trial," The Health Journal, Vol. 40, no. 4, 1981.**

Subject:
A description of the study carried out in Oxfordshire, England, to determine whether education provided to women in family planning clinics would result in those women seeing their general practitioner to be screened for rubella and immunized as needed. In this case the educational effort appears to have had little impact.

Target Audience:
All women attending intervention clinics (family planning) who might have risk of contracting rubella.

Channels of Communication:
Posters in the clinics; interpersonal communication from clinic staff, particularly the nurses and doctors; leaflets handed out to the women in the clinics.

Sponsoring Agencies and Cost:
The Oxfordshire Area Health Authority (T). Cost information was not provided.

Time Period:
The study was carried out during the period of four consecutive weeks.

Methodology:
The effect of an education program was studied in two clinics in Oxford; two control clinics were also chosen that were similar in nature to the two studies clinics. All women attending the intervention clinics during the four weeks were exposed to information on rubella immunization as well as receiving their normal contraceptive care. Posters provided by a pharmaceutical company manufacturing rubella vaccine were displayed in the clinic waiting rooms; the receptionist and nurses were encouraged to discuss the subject of immunizations with the waiting women; the doctors discussed rubella immunization with the women after the normal doctor-patient consultation; all women were given a leaflet explaining the dangers of rubella in pregnancy and the need to check with their doctor to request screening and immunization. The researchers then checked to see how many women checked with their doctors three to four months after the program ended.

Outcomes and/or Recommendations:
12 (7%) of those receiving education approached their doctor for screening, while only 3 (2%) of the controls did so. Although this represented a significant difference, the difference was confined to the 25-29 year old age group. Although the study shows that education had little effect on behavior, it cannot explain why this is the case. However, it is known that about 10% of the women using the clinics are not registered with a doctor, which may have inhibited them from contacting one for the screening.

25. Ryan, R. P. "Measles Vaccination: the 1983 Befordshire Campaign," Health Education Journal, Vo. 43, no. 4, 1984.

Subject:
This article documents how a measles vaccination campaign was initiated and carried out in the North Bedfordshire District of the United Kingdom.

Target Audience:
A general successful public information campaign aimed at teachers, public health staff, parents, and the children themselves. The campaign was focused on cooperating schools, providing information to and requesting it from teachers. The success of the campaign to a certain extent was attributed to its focus on dispelling myths about rumored harmful side effects of the vaccination.

Channels of Communication:
The local media, including the Bedfordshire Times newspaper and television. A broadsheet was printed; a poster and leaflet were developed for children in the schools. Set displays were used by the Health Education Department in clinics, and a "measles hotline" was set up for use by teachers and parents.

Sponsoring Agencies and Cost:
The North Bedfordshire District Health Authority. Cost = 7,000 pounds.

Time Period:
The campaign ran for six months during the autumn and winter of 1983-84.

Methodology:
The campaign reached general practitioners, health visitors, and schools. The first step was the implementation of a study of the district to determine the causes for a drop in the vaccination rate. The District Medical Officer attended meetings of Health Visitors and Clinical Medical Officers to persuade parents to accept measles vaccination. The District Health Education Officer planned a public campaign with the help of the regional public relations officer, utilizing the interest of the local media, the newspapers, radio and television stations. A broadsheet using the campaign slogan: "No Bedfordshire Child Should Get Measles" was printed, leaflets were printed and distributed in the schools directly to children, and a poster "Measles is Misery" was produced. Set displays were used in clinics, and a "measles" hot line was set up for teachers to use in reporting children needing immunizations. A special health visitor was hired to promote the measles vaccinations in every possible way.

Outcomes and/or Recommendations:
The project found that the number of measles vaccinations rose from 760 between October 1982 and February 1983, to 1,656 during the same period the following year, while notifications of the disease fell from 169 to 23. The communicators discovered the importance of dealing with adverse publicity that related to illness suffered from the vaccinations.

26. **Basu, R. N.** "India's Immunization Program," World Health Forum, Vol. 6, 1985.

Subject:
This article documents some of the results of the expanded program of immunization India commenced in 1978, as well as some of the other activities that have been undertaken since that time. It is a good descriptive example of a complex national program.

Target Audience:
Final audience was children aged two or under; article did not elaborate on target audiences.

Channels of Communication:
Article did not elaborate on this subject; it appears that the main focus of information was the health clinic staff, who received training in immunization techniques and program management.

Sponsoring Agencies and Cost:
The government of India. Cost information was not provided.

Time Period:
Program has been in operation since January 1978.

Methodology:
Vaccination cards have been issued to eligible children, so records can be kept of their immunization histories. Surveys have been carried out to determine the extent of mothers' knowledge concerning vaccinations. To improve epidemiological surveillance, "sentinel centers" for collecting data are being identified and utilized. Retrospective national sample survey of the magnitude of the problems of neonatal tetanus and polio was undertaken in 1981. In the period 1980-83, five national courses on planning and management of the expanded program of immunization were held. Those participants then held training courses for State-level officials.

Outcomes and/or Recommendations:
Health workers are being trained not to vaccinate only the most accessible children. Although the program is behind schedule in covering the eligible population, the reported vaccination performance is increasing year after year. From April 1983 to February 1984, the number of children who received complete vaccination against diphtheria, pertussis, and tetanus increased by 12% and 72% respectively compared with the same period in the previous two years.

27. Wilson, Jean, "Consortium against rubella," World Health, March 1985.

Subject:
A description of the campaign launched in the United Kingdom to immunize all young women against rubella. The article demonstrates that campaign successes to date have been greatest among schoolgirls below 16. Perhaps special messages and materials need to be developed for young women 16-24.

Target Audience:
In the final analysis, young schoolgirls and every woman who has had a positive blood test. In the second year of the campaign, emphasis will be placed on women of childbearing age, and women of the various ethnic groups in the United Kingdom are also targeted.

Channels of Communication:
The mass media, including radio, television, and newspapers. Films have also been produced. Posters and door-to-door handouts are distributed; the Post Office is postmarking letters with the slogan "Don't risk rubella. Be wise, immunize." Extensive use has been made of well-known figures, such as the Princess of Wales, to promote the campaign, and of professional associations, health services, and special interest groups.

Supporting Agencies and Cost:
The Department of Health and Social Security and the Health Education Council joined with 11 national nongovernmental organizations to promote the campaign. Cost was 1.8 million pounds.

Time Period:
The program was carried out over a three-year period.

Methodology:
The non-governmental organizations set up a national office to coordinate the resources of the communities involved, and they sought collaboration from all relevant medical and educational bodies and organizations of women and youth. Report cards, which looked like commercial credit cards, were given to every vaccinated schoolgirl and to every woman with a positive blood test. A "Birth Day" card reminds unprotected mothers of their need to be immunized before pregnancy. The media collaborate by filming well-known figures promoting the program. Schools have appointed staff members or students to serve as coordinating and liaison persons to the program, and the Girl Guides association is actively promoting the program among its members. Television shorts are aimed at schoolgirls and have been regularly shown on local channels; a film is being produced for schools. Poster competitions are being held. Women's groups are actively involved in the promotion. Publicity has been distributed by boy scouts, milkmen, and staff. Literature is being printed in languages such as Punjabi, Hindi, Urdu, Bengali, and Chinese.

Outcomes and/or Recommendations:
Returns have shown a striking increase in the number of young schoolgirls immunized. The percentage of 15-year old girls immunized against rubella include Oxford 92%, Wessex 96%, and Trent 94%. However, the program still notes a great lack of awareness and motivation among young women aged 16-24.

28. Ministry of Health, Republic of Colombia, "National Vaccination Crusade: A Summary of the Experience, Achievements, and Perspectives," Bogota, Colombia, 25 August 1984.

Subject:
Immunization (diptheria, polio, tetanus, pertussis, and measles)

Target Audience:
General public with emphasis on covering children below the age of 4.

Channels of Communication:
The emphasis for the National Vaccination Crusade was heavily interpersonal, depending on the use of health personnel/agents and community leaders participating in the Expanded Program on Immunization (EPI). Those people worked directly in the communities to get families to take children for immunization and follow-up. This strategy of working directly in the communities was known as the "channeling strategy." Booklets were distributed to vaccination centers, two newspapers with national coverage participated, as well as regional papers. Television and radio were also employed to disseminate health promotion and educational messages, particularly to urban dwellers. The "Cadena Radial Colombiana" (CARACOL), which includes more than 90 stations, served as an important channel for the transmission of mutually reinforced messages. Organized volunteers from such groups as the boy Scouts and Red Cross also collaborated in information diffusion, and the Ministry of Communications provided telephone access for transmission of vaccination reports.

Supporting Agencies and Cost:
The Colombian Ministry of Health worked through the National Health System structure to implement the project. International agencies cooperating in the venture were the Pan American Health Organization/World Health Organization (PAHO/WHO), UNICEF, and the United Nations Development Programme (UNDP). Other agencies or institutions that collaborated in the efforts were the Catholic Church, Ministry of Defense, Ministry of the Interior, and Ministry of Education, among many others. No information on cost was included in the article.

Time Period:
Colombia selected April 2-7, 1984, as National Health Week; two weeks later the Ministry of Health set up the National Vaccination Crusade with three critical dates for immunization: June 23, July 28, and August 25, 1984. Evaluation of results was to take place after this last date.

Methodology:
In 1983, Colombia's National Health System began to concentrate on measures for reducing child morbidity/mortality. Immunization was one such method. Support for this direction was expressed at the highest levels of the government, as well as by UNICEF officials. The National Health Week devoted time each day to educational messages related to specific children's health. Mass media and health education campaigns in public schools were carried out; a trademark (a healthy, happy child named "Pitin") was designed and used. Political support was broadcast over mass media channels. The National Vaccination Crusade was set up to build upon the EPI in Colombia. During 1981, under EPI, the "channeling strategy" was carried out--a household-level

search for nonvaccinated children, and with the assistance of community leaders, channeling them to health clinics for immunization.

The Vaccination Crusade, based on three critical dates, was a well organized method for accelerating the channeling strategy. The Crusade also allowed children who had been previously vaccinated to complete their immunization series. A coordinating committee oversaw the activities and planning, and programs were monitored through monthly timetables checked every other day. Training in management, channeling strategy, and immunization techniques were carried out; instructions, standards, and norms were distributed to staff and participating agencies on a regular basis.

The Health Information System set up provided for motivating community's involvement through mass media promotion. Reports on vaccinations and degree of achievement were broadcast and circulated in "competing" regions. The second information flow was structured to provide data needed to evaluate the Crusade at all levels.

Social communications media (press, television, and radio) were employed, and community groups, service organizations, private enterprise, and government agencies were mobilized to provide support and assistance to the program.

Outcomes and/or Recommendations:
The campaign led to massive country-wide immunizations against the five diseases mentioned. After the first two critical dates, over 800,000 children had been vaccinated. The corresponding goal achievement percentages for these were 88 and 93 respectively. From the information gathered, it appears that the positive results are affected by the promotion of public health education by the mass media, the level of collaboration involved via social mobilization, achieved vaccination coverage in a short period of time, and strengthening of the "channel strategy." It was obvious that positive political will and support made a major contribution to the achievements of this program.

29. Macdonald, Heather, and David Roder, "The Planning, Implementation, and Evaluation of an Immunization Promotion Campaign in South Australia," Hygie, Vol. IV, 1985/2, pp. 13-17.

Subject:
Immunization, particularly for measles and rubella.

Target Audience:
General public, although with some emphasis on lower socio-economic groups, parents, and children. Special informational and training sessions were aimed at a variety of health personnel.

Channels of Communication:
A wide variety of approaches were used: television and radio commercials for the public, school-based education and posters, preventive messages attached to commercial products, messages delivered by mail, training programs for health professionals, leaflets, films, slides, and videotapes. Professional and civic groups were informed and used to spread information about immunization.

Supporting Agencies and Cost:

The implementing agency was the Health Promotion Services and Epidemiology Branch of the South Australian Health Commission. The Commission placed special emphasis on working with professional and civic groups in the areas involved. Support was sought from such organizations as the Local Government Association, Australian Medical Association, trade unions, and the Doctors Reform Society.

Time Period:

The actual campaign was four weeks in length; however, extensive activities and planning took place in the five-month period leading up to the campaign.

Methodology:

During the five months before the actual campaign got under way, several activities took place. First, focus group interview techniques were used to explore community attitudes, awareness, and knowledge of immunization. Six groups of various age and socio-economic profiles were studied, and concept testing of certain campaign themes and stimulus materials took place. These interviews showed that: there was interest in learning more, the government should advertise immunization services, and that confusion existed over immunization requirements.

The campaign staff also sought support and assistance from health, education, and welfare agencies in the project. Articles on immunization were sent to professional journals, and medical practitioners received a report outlining the campaign. Local councils of government were solicited for their support. A series of seminars for health providers was also given, in which campaign strategies and materials were demonstrated and explained.

The campaign itself included the following elements: television and radio commercials that promoted immunization, particularly for rubella and measles; posters and leaflets on immunization that were distributed through schools and community organizations; and radio and television "talk shows" that discussed immunization and the campaign. These communication activities were further supported by: immunization schedules distributed to pharmacists; immunization messages distributed along with contraceptives; leaflets printed in seven languages given out by health agencies; films and slide-tape services provided to health professionals and community groups; a "Professional Development Learning Pack" distributed to health providers; and a videotape on immunization available to civic groups interested in supporting the program.

Outcomes and/or Recommendations:

Evaluation of the campaign took place in three stages. In 1981, a short-term evaluation took place in which haphazardly selected adults were interviewed to determine the penetration of the campaign and the community response. Numbers of attendances at medical practices and clinics, and the uptake of vaccines were monitored during 1981 and compared with data from previous years. In 1982-83, data was collected to note the changes in the uptake of vaccines, clinic attendance, and the percentage of pregnant women with demonstrable rubella antibodies. A long-term evaluation was to consider morbidity statistics.

The survey of adults indicated that approximately 18% could recall the campaign without prompting. Almost half (40.8%) could recall a specific advertisement on immunization. More people remembered advertisements on the radio and television rather than posters and leaflets. In 1981, there were increases in immunization attendance at public clinics, compared with attendance rates in 1979 and 1980. The number of attendances during 1981 for measles immunization was 64% higher than in 1979 and 1980, with the largest increase following the campaign's beginning in May. There was also evidence that attendances for "booster" doses of tetanus toxoid and combination of diptheria and tetanus vaccines may have increased.

30. **State of the World's Children, 1986, UNICEF, Division of Communication and Information, New York, 1986.**

Subject:
Description of recent successful immunization campaigns in China, Turkey, El Salvador, Colombia, Burkina Faso, Bolivia, Brazil, Nicaragua, India, Dominican Republic, Ecuador, Pakistan, Vietnam, Tanzania, Sudan, Ethiopia, Somalia, Syria, Suriname, Oman, and Afghanistan.

Target Audience:
Chidren under 5.

Channels of Communication:
Mass media and face-to-face (exact mix varies by country).

Sponsoring Agencies and Cost:
Ministries of Health with support (in some countries) from bilateral and international donors.

Time Period:
1984-1986.

Methodology:
This publication briefly describes national immunization efforts that have occurred in twenty-one countries over the past eighteen months. Most of these efforts have focused on a highly publicized series of "immunization days," backstopped by extensive media coverage, social mobilization of volunteer support workers, and high level political backing.

Outcomes and/or Recommendations:
In China immunization rates have lifted from 40% to 90% in parts of five provinces with a total population of 90 million; in El Salvador two-thirds of the nation's 400,000 unimmunized young children were protected against five major infectious diseases; Turkey immunized 3 million children against five diseases in the first eight days of a campaign; in the Dominican Republic 95% of children have been immunized against polio and measles; in Brazil national immunization campaigns have virtually eliminated childhood poliomyelitis; and nationwide coverage for measles and DPT has reached 60%; Colombian coverage rates have reached 75% for five vaccine preventable diseases; in Bolivia immunization rates have been pushed to over 70% for polio and 85% for diphtheria, whooping cough, and tetanus; in Pakistan the percentage of children under five fully immunized against major diseases has risen from less than 5% in the early 1980s to approximately 65% today; in Sri Lanka an expanded program of immunization has already reached well over half of the nation's children;

initial results from a nationwide campaign in Nigeria show that eight to ten times as many children are being vaccinated each month as were reached in corresponding months of 1984; in Tanzania immunization coverage has been pushed to 56% for polio; 82% for measles, and 54% for tuberculosis; in Ethiopia over 50% of the children in Addis Ababa were vaccinated against the main vaccine-preventable diseases; in Somalia more than 80% of children under 2 in the cities of Mogadishu and Hargeisha were immunized; in Syria immunization rates have been raised from 13% to 63% in the Ragga area, one of the most remote and inaccessible governorates in the country; in Burkina Faso 65% of the nation's children were immunized with "single shot" vaccines against measles, meningitis, and whopping cough; in Suriname immunization coverage has risen to over 80% for children under one against diphtheria, whooping cough, tetanus, and polio; Oman has reached an immunization level of 70%, and Saudi Arabia now has 75% coverage; in Afghanistan immunization rates in Kabul have risen to more than 80% against all six vaccine-preventable diseases.

31. **Babor, Thomas, Michel Treffardier, Jacques Weill, Lug Fegueur, and J.P. Ferrant. "The Early Detection and Secondary Prevention of Alcoholism in France," Journal of Studies on Alcohol, Vol. 44, no. 4, 1983.**

Subject:
The authors describe a major secondary prevention program established in France to screen, diagnose, and treat persons in the prodromal stages of alcoholism. They also discuss the application and validity of a simple examination procedure used to identify alcoholics in the program. 130 Centres d'Hygiene Alimentaire (CHAS)--Centers of Nutritional Hygiene--have been established throughout France since 1972, based on Dr. Le Gô's method and grid.

Target Audience:
Excessive drinkers (people in the prodromal drinking stage).

Channels of Communication:
Interpersonal.

Sponsoring Agencies and Cost:
The Ministry of Health provides grants for planning and start-up expenses, the central government supports 84% of the annual budget and the local department funds the remainder. Cost information not available.

Time Period:
Not defined.

Methodology:
The Le Gô Method begins with a patient's being referred to a clinic. A 1980 Survey indicated that 7.7% were referred because of motor-vehicle violations; 13.1% through social-service agencies; 12.1% by industrial physicians; 11.3% by family physicians; 11.1% by hospitals; 10.7% by voluntary admissions; 6.9% by the family; 5% by license renewal offices, and 1.3% by blood donors.

The clinics (1) stress the importance of diseases related to nutrition, such as alcoholism, obesity, diabetes, and malnutrition; (2) respond to the needs of habitual excessive drinkers who are relatively tolerant to alcohol but without serious psychological problems, and (3) serve the needs of alcoholics who reject psychiatric treatment but who might accept a more discreet form of psychological counseling.

Treatment consists of a series of outpatient visits through a combination of diagnosis in family and dietary counseling, medical care, and health education. Special attention is given to early identification, ambulatory care, and careful monitoring of the patient's progress by means of repeated grid examinations in conjunction with laboratory tests measuring liver function.

The Gô Grid consists of 12 boxes placed on two lines. The first line deals with the objective "cardinal" signs detected by an examination of three aspects of the patient's physical appearance (skin, eyes, and tongue) and three areas of possible tremor (mouth, tongue, and extremities). Each of these is rated on a six-point scale ranging from 0 to 5. In addition to the cardinal signs, several characteristics are examined and rated on the second line of the grid: subjective problems (psychological, digestive, and psychomotor), liver volume and consistency, blood pressure, and weight. Summary scores of the patient's general condition are obtained by totaling the scores for the cardinal signs. A score of 0-3 is that of a normal drinker; from 3-5 begins the danger zone; from 6-11 is characterized by physical dependence and further physical deterioration, and dependence is assumed to be established when the grid score attains 9-10 points. Psychological and physical complications have developed in scores of 12-30.

Each center is staffed by at least: one nurse, one social worker, one medical secretary, and one physician who is generally an internist or a general practitioner. Education and counseling are the primary tasks of the staff nurse, who attempts to show the patient the relationship between poor nutrition, health disorders, and behavioral problems. One diagnostic tool is an interview about eating and drinking habits/patterns. The patient is encouraged to focus on the detection of subclinical signs of dependence such as insomnia, morning sickness, heartburn, and anxiety. The physician's role entails diagnosis, medical treatment, counseling, and surveillance. The diagnosis is through the grid method and laboratory tests. Dietary habits are emphasized more than drinking per se, and the patient is instructed to begin gradually reducing alcohol consumption. Informal instruction is also given on self use of the Le Gô Grid. Feedback on progress is given at each consultation, and the results are noted in the patient's record. The social worker spends a maximum amount of time visiting patients at home or at work, and providing consultation to spouses, children, employers, etc.

Outcomes and/or Recommendations:

- Le Gô's experience showed that early intervention with excessive drinkers successfully prevented early mortality from accidents and disease.
- Researchers say that early screening results in a fairer distribution of the economic burdens caused by illness. This is particularly true in a country covered by national health insurance, because alcoholics are seen as imposing an unfair burden on the health system.
- Government intervention to control the problem of drinking is a means of obtaining certain social goals, i.e., on the job safety for the drinker and those who work with him, for highway safety, increased productivity, etc.
- Although several checks for inter-rater reliability with the "Gô Grid" have been conducted, and results suggest that the method may reliably differentiate less dependent from more dependent drinkers, independently trained examiners may have different notions of absolute values to apply to these differences in degree. This may limit the usefulness of the method as a screening device, unless diagnosis can be improved by more formal training of examiners.
- Research data do indicate that Le Gô's clinical signs of appearance and tremor may constitute observable and quantifiable manifestations of alcoholism.

- o Using the five CHAS in the Department of Aisne, France, as a basis for projections, it is estimated that more than 100,000 patients are treated per year.
- o Although the authors state that more careful evaluations need to be conducted, the program seems to be effective. The most recent evaluation of 107 CHAS centers which were surveyed by mail questionnaires, showed that 21% of the patients recently treated were currently abstinent, 33% were "Temperant" (drinking moderately), and 31% had stabilized.
- o They state that one innovation of the program was treating it as part of an innocuous problem of poor nutritional habits, rather than a psychological disturbance. This seemed to make the program more acceptable to drinkers.
- o A second innovation which they claim to be successful is the treatment of moderate drinking as a legitimate treatment goal for excessive drinkers without rejecting the necessity of abstinence for alcoholics at a more advanced stage of progression.
- o Finally, the authors say that because the clinical signs of alcoholism are given such a prominent role in the program, the grid method serves as both a diagnostic litmus test and an objective indicator of the success or failure of treatment. This gives it an advantage over methods which rely solely on the drinker's self-reported symptoms or behavior.

32. **Cook, Royer, Hazel Lawrence, Carolyn Morse, and Janice Roehl.** **"An Evaluation of the Alternatives Approach to Drug Abuse Prevention," The International Journal of the Addictions, Vol. 19, No. 7, 1984.**

Subject:
The authors discuss an alternatives-oriented, school-based drug abuse prevention program, Positive Alternatives for Youth (PAY), in Milwaukee, Wisconsin, U.S.A.

Target Audience:
Junior and senior high school students in the Milwaukee, Wisconsin, public schools.

Channels of Communication:
Formal schools (through a PAY staff person and a teacher-trainee).

Sponsoring Agencies and Cost:
The schools and PAY with research funding from the National Institute on Drug Abuse. Cost information not provided.

Time Period:
Two years, 1979 to 1981.

Methodology:
The PAY program presented alternatives classes in the public schools of Milwaukee, and was evaluated in two cycles over a period of two years. In both cycles, a pre-test/post-test control group design was used; a "true"

experimental design in which students eligible for the program were randomly assigned to either the PAY alternative classes or to a no-treatment control group and were assessed on the criteria of interest both before and at the end of the semester-long PAY classes. Analysis of variance and analysis of covariance were used to assess the significance of differences between the PAY students and the control students.

The PAY program is a series of alternatives classes which meet two to three times a week during regular school hours and are conducted jointly by a PAY staff person and a teacher-trainee. The objectives of the program, jointly developed by the research team and the PAY staff, in order of importance, are:

- o To improve interpersonal skills: Students in PAY classes will become more effective in establishing interpersonal relationships with peers and with adults. They will learn to communicate ideas and feelings more effectively, and to be more assertive in interactions with others.
- o To improve self-esteem, feelings of power, and skills to make decisions about life and career: Students in the classes will feel better about themselves and will feel that they have some control over their lives, rather than being at the mercy of forces over which they have no control. They will also learn to make decisions about their life and will begin to perceive more career options available to them.
- o To improve the number and variety of positive behaviors: They will more frequently engage in a larger variety of positive, healthful activities and will less frequently engage in deviant or delinquent acts. They will more frequently seek nonchemical means to alter mood and seek comfort.
- o To prevent alcohol and drug abuse: In comparison to control subjects, these students will engage in less alcohol and drug use. To the extent that drugs and alcohol are used, they will be used more reasonably by these students than students in the control group.

In the 1979-80 school year, three high schools and one junior high school were involved in the program. In the 1980-81 school year, two junior high schools and one senior high school participated in the program (the two schools that participated the first year continued to operate the program on their own). Thus, the emphasis shifted from senior high to junior high school students the second year. The typical class involved one or two experiential exercises, such as active-listening role plays and the "coat of arms" exercise where each student draws a coat of arms that represents his/her values and characteristics, interspersed with lecturettes and discussion.

Outcomes and/or Recommendations:

- o PAY students showed a decrease on the drug use checklist only on hard alcohol.
- o On the Feelings and Remedies Scale, PAY students reduced their use of drugs and alcohol in response to negative emotional states, whereas control students increased drug and alcohol use in response to negative states.
- o There were no differences in response to positive states; apparently recreational use of alcohol and drugs--to "feel good" or "have fun"--is unaffected by the PAY classes.

- o In examining negative emotions, it was in response to anxiety in particular that the PAY students displayed higher self-esteem scores than control students.
- o PAY students displayed higher self-esteem scores than control students.
- o Effects in the second year were less strong than in the first, probably because of the age difference in students (first year mainly senior high and second year mainly junior high). Perhaps it is because of the kind of program offered--complex concepts of self and interpersonal skills.

33. **Goodstadt, Michael, and Margaret Sheppard. "Three Approaches to Alcohol Education," Journal of Studies on Alcohol, Vol. 44, No. 2, 1983.**

Subject:
The article reviews and compares three approaches to alcohol education: a cognitive program (leading students to an in-depth understanding of alcohol and its use), a decision-making program (related to alcohol, its use, and individual and social effects), and a values-clarification program (that made students aware of their own values vis-a-vis alcohol as well as those of others). The cognitive program was most positively received and was superior in raising levels of knowledge; the values-clarification program was least effective, especially as measured by the program's impact on current and expected alcohol use. These three approaches were chosen because they are representative of dimensions currently favored by health educators. This case study illustrates the need for planners to systematically disaggregate their target audience in order to maximize the effectiveness of an educational intervention.

Target Audience:
Students in health classes (ages are not given) in urban Ontario, Canada.

Channels of Communication:
Formal school system.

Sponsoring Agencies and Cost:
Addiction Research Foundation of Canada. Cost information not available.

Time Period:
A two-week educational program during health classes, with a six-month follow-up.

Methodology:
Sample and Experimental Design: The study employed preprogram, immediate postprogram, and six-month follow-up assessments. To control for teacher and school effects, two instructors and three schools were used. The instructors were members of the research planning and development team and were unrelated to the participating schools; both instructors taught each of the three experimental programs in both of the two experimental schools.

Seven regular health classes (20-30 students) from School A and 9 classes from School B were randomly assigned to one of the four conditions and to one of the two instructors. The programs were conducted in School A in November and in School B in the following March (the delay was due to a prolonged teachers' strike). The four classes from School C were used as outside control classes. The three schools were from the same geographic and socioeconomic (blue-collar) areas of a large Ontario city. The use of two experimental schools and two instructors permitted a test of replication of program effects, in the absence of more complete matching or sampling designs. All classes were either uniformly girls or boys. A total of 332 students participated in one of the three experimental programs. An additional 208 students acted as no-treatment controls.

Instruments were developed for three testing periods: preprogram, postprogram, and a six-month follow-up assessment. The instruments included a multiple-choice test of students' alcohol knowledge, two 12-item parallel-form attitude scales, and a questionnaire on alcohol use.

Outcomes and/or Recommendations:

- o The cognitive program improved levels of alcohol knowledge significantly more than did other conditions; however, no significant correlation was found between changes in knowledge and changes in reported behavior, behavioral expectations, or attitudes.
- o The decision-making program was successful in leading students to a better understanding of major decision-making concepts, demonstrating the viability of this program in teaching about decision-making.
- o Few changes occurred in the values rating or in the perceived relationships between valued goals and the use of alcohol.
- o Significant positive correlations were found between changes in attitudes and changes in reported alcohol use. These findings suggest that further examination of the role of attitudes in alcohol education programs is warranted.
- o Changes in reported alcohol use were not supported. This finding supports previous studies which have examined behavioral impact of drug education programs. Whereas behavioral outcomes are desirable, they probably represent unreasonable expectations for interventions of short-term duration.

Authors report that the three program approaches to alcohol education were received differently by students.

- o The cognitive program, the most traditional of the three, was the most strongly endorsed by students, probably because it met their expectations. However, results of the program were not strong.
- o The decision-making program failed to meet students' expectations; however, it too contained a strong cognitive component. Other types of decision-making materials should be tried.
- o The values-clarification program showed a significant deterioration as measured by the alcohol-use indices. The program may not have been appropriate for the students in at least three of the four programs, since they were composed of boys who exhibited behavioral and emotional problems.

The researchers suggest the following conclusions, based on the above results and previous experience:

1. Students can be receptive to alcohol education programs.
2. Students' expectations regarding content and format of programs should, perhaps, either be brought into line with the reality of the program's characteristics prior to the program's beginning or be met as part of the program to which they are exposed.
3. Students' levels of knowledge can be improved by programs, but this does not imply either that large shifts in knowledge will occur or that their attitudes or behavior will change correspondingly.
4. Program planners should consider different designs for students of varying ability and background, in order to determine the best match of program to student.

34. **Maloney, Susan K., and James C. Hersey. "Getting Messages on the Air: Findings from the 1982 Alcohol Abuse Prevention Campaign," Health Education Quarterly, Vol. 11, no. 3, Fall, 1984.**

Subject:
The authors discuss a major public education campaign in the U.S. which was designed to focus national attention on the prevention of alcohol problems. One of the main problems involved obtaining sufficient broadcast time to reach substantial numbers of a target audience. Key elements in the success of the effort were: (1) producing high quality broadcast materials, (2) providing technical assistance to aid state and local groups in the message dissemination process, and (3) providing for state and local control over the timing and release of materials. The article describes the experiences of federal, state, and local campaign developers that contributed to the placement of public service announcements and the generation of local campaign activity. These included lessons about materials development, state and local involvement in campaign dissemination, and distribution techniques. Authors believe the findings will benefit anyone planning a health information program using the mass media.

Target Audience:
The campaign was directed at two principal audiences: women and youth.

Channels of Communication:
The mass media, including 12 television spots, 8 radio spots, 3 posters, 4 magazine advertisements, 4 new brochures, 3 editorials, 6 scripts in radio announcer copy form, a manual for participating organizations, photoscripts, a campaign fact sheet, 3 talk show scripts, a campaign folder, and a sample press kit.

Sponsoring Agencies and Cost:
The National Institute on Alcohol Abuse and Alcoholism (NIAA), along with the State Alcohol Authorities, the American Red Cross, Junior League, 4-H, B'nai B'rith, YWCA, PTA, American Automobile Association, and the National Council on Alcoholism. NIAA spent $2.1 million on organizing the campaign. An estimated $10.1 million worth of air time was donated.

Time Period:
The public campaign was conducted from 1980-1982, with special media broadcasting between February and December 1982.

Methodology:
A review of the literature was conducted on alcohol use patterns of women and youth and on the fetal alcohol syndrome. Six focus groups were conducted during August of 1980 to identify major issues and concerns of youth, pregnant women, and other women and to explore group participants' attitudes and feelings regarding alcohol use and abuse. These concerns and ideas were used in the development of materials. Information on the most effective mediums for reaching each population, the times of day at which the target audience is most likely to watch television or listen to the radio were examined also.

Three concept development meetings were held in September, 1980, in order to discuss campaign plans, information, and to obtain participants' views regarding which subpopulations should be used; ideas on messages about drinking for each population; specific themes, styles, slogans, and dissemination strategies for each target audience.

Draft scripts were then developed by professionals, with 11 scripts selected for extensive testing and review. The scripts were tested with target audiences to elicit reactions regarding comprehension and relevancy. Additional pre-testing was conducted by presenting scripts for women in women's groups and the youth and alcohol scripts in ten high school classes. Drafts of the scripts were sent to each State Alcohol Authority and other professionals in the field for professional review. Over 150 reviewers in all were involved. This helped refine the clarity of the messages and increased participation of the state agencies. Final scripts were then approved by NIAA, and television and radio spots were produced.

A deliberate effort was made to encourage national, state, and local organizations to carry out dissemination efforts associated with the campaign. This included early involvement in planning, campaign preview sessions, or "showcases." Showcases were two and a half day workshops which gave an overview of the program, reviewed the materials, and also sessions on how to gain access to broadcast and print media, and how to make effective broadcast presentations. State planning meetings were also held prior to the meetings in some states.

A hotline was available for participating state and local organizations on issues such as: motivating staff, planning workshops, strategies for best utilizing printed materials, etc.

Outcomes and/or Recommendations:

- The campaign reached more than 68 million viewers.
- Given that the focus of the campaign was on younger women, 22% of all women ages 18-34 were reached by campaign spots relating to either the women and alcohol theme or the fetal alcohol syndrome theme.
- Exposure to youth was slightly lower with 19% of youth in the 75 sites evaluated estimated to have viewed the youth and driving spots.

- The campaign may have been successful because it ran three months. A one-month blitz seems to be less effective.
- Data suggest that the areas where the messages reached the most people aired programs on more than one station.
- Multiple spots were shown in areas that reached the largest audiences.

State and local findings based on the in-depth study of 12 local broadcast areas, included:

- A significant amount of air time can be generated for public service messages, depending on the quality of the production, careful planning of all aspects of the campaign, and the early involvement of state and local groups.
- Technical assistance for state and local efforts was crucial to the success of the campaign.
- Decentralization of the campaign was important, giving state and local groups control over territories they know well.

35. **Durell, Jack, and William Bukoski.** "Preventing Substance Abuse: **The State of the Art**," Public Health Reports, Vol. 99, no. 1, January-February 1984.

Subject:
The authors review three primary prevention strategies developed over the past two decades for preventing substance abuse.

Target Audience:
Young people at the junior and senior high school levels.

Channels of Communication:
Different programs discussed used different combinations of: mass media, support media, inter-personal education, and formal schools.

Sponsoring Agencies and Cost:
Again, this varies with the program described. Some examples are: the National Institute on Drug Abuse (NIDA), the Special Action Office for Drug Abuse Prevention, the State of Georgia, etc. Cost information was not provided.

Time Period:
Varies with program.

Methodology:
The article reviews the following five types of programs:

Media Campaigns: efforts attempt to impress upon the populace the harmful effects of drugs through mass media coverage;
School Programs: which focus on disseminating information about drugs and their effects, as well as to promote attitude and behavioral change among junior and senior high school students;
The Generic Approach: usually classified as either "affective education" or "alternatives." These programs have been designed to overcome some of the general problems of youth, with respect to their

orientation to authority, their social interaction, and their self-esteem, without focusing directly on drug use.

The "macro" approach: patterned after terminology used in the smoking reduction field, and emphasizing changing the environment in which a child is living in an effort to create a climate of nondrug use, e.g., in Atlanta, Georgia, where the Unified Parents Groups of Atlanta and Northside High School's principal cooperated to reduce drug use through tightened school discipline and improved educational standards.

The "micro" or "saying no" strategy: whereby students are trained to resist enticements from peers and the media.

Outcomes and/or Recommendations:

- A review of evaluations of media campaigns show that they have often failed because they unrealistically exaggerated the harmful effects of drugs. The problem, according to NIDA, lies, not in the absence of public information campaigns, but in the message conveyed, and the credibility of the message.
- The school programs reviewed showed positive results in making students more knowledgeable about drugs; however, attitudes and behavior have not been significantly affected. Other studies say that some programs have decreased drug use. The nature of the information, the way it is communicated, and the kind of students to whom education campaigns are targeted seem to be important factors in program success.
- The generic approach, according to National Institute on Drug Abuse studies, has also proven disappointing. Although some programs showed success, nondrug-specific affective education approaches are not sufficient to prevent the onset of drug use by youth.
- The authors see the "macro" and "micro" approaches as more promising. In the Atlanta example, within 3 years there was a dramatic reduction in drug and alcohol use on the school campus, a significant rise in Scholastic Aptitude Test scores and math and reading skills, increased enrollment in advanced science and foreign language courses, and more student participation in athletic and extracurricular activities. Several studies of "macro" approach applied to smoking prevention programs show reductions in the percentage of new student cigarette smokers by 50% or more. This 50% reduction in new smokers in the first year of the study was followed by a second year result of 87% fewer new smokers among treated students, in comparison with controls.

35. **Thompson, Merita, Raymond Daugherty, and Vivian Carver.** "Alcohol **Education in Schools:** Toward a Lifestyle Risk-Reduction Approach," Journal of School Health, Vol. 54, no. 2, 1984.

Subject:

This article reviews the weaknesses in purposes and goals of many alcohol education programs and calls for a refocusing of alcohol education to facilitate the adoption of low-risk lifestyle choices regarding decisions about abstinence and quantity and frequency of alcohol use. The authors believe that research and education activities should become more focused on the link between the quantity-frequency of alcohol use and on the information and attitudes that support low-risk versus high-risk abstinence, quantity, and frequency choices.

Target Audience:
Students (the age is not defined).

Channels of Communication:
Formal school system.

Sponsoring Agencies and Cost:
Not applicable, since this is a recommended, not a tested, program. It is unclear as to whether the schools, state, or someone else would sponsor the program. Cost information was not discussed.

Time Period:
Not specified.

Methodology:
The authors state that most alcohol programs have one of the following goals: nonspecific prevention of alcohol problems; prevention through changing attitudes and behaviors, and prevention by promotion of resposible drinking or decision-making. They point out that the first of these goals is too broad and unrealistic; the second goal of many current programs does not define the relationship between knowledge, attitude, and behavioral change; the third, responsible behavior, they say is inadequate, since it implies that alcohol use is acceptable and does not emphasize that it is a health hazard.

Outcomes and/or Recommendations:
The authors see the purpose of alcohol education as to provide students with knowledge, skills, and experiences that will enable them to make low-risk choices about alcohol. They convert the purpose into five goals:

- Students will develop an understanding that each individual's choices about abstinence, quantity, and frequency of alcohol consumption primarily determine whether or not they will experience alcohol-related problems.
- Students will acquire the skills needed to estimate their risk of an alcohol-related problem and to identify specific choices about alcohol consumption associated with a low-risk or high-risk of an alcohol-related problem.
- Students will acquire the skills needed to identify and evaluate their own attitudes, values, and expectations regarding alcohol that might influence whether they make high- or low-risk alcohol-consumption choices.
- Students will acquire the skills needed to identify and evaluate peer, family, and societal messages, attitudes, beliefs, values, customs, and expectations that support or encourage high-risk and low-risk alcohol consumption choices.
- Students will experience activities designed to develop a positive self-concept and the personal skills necessary for adopting and maintaining low-risk alcohol-related attitudes and alcohol-consumption choices.

37. **Danaher, Brian G.** "Smoking Cessation Programs in Occupational Settings," **Public Health Reports**, Vol. 95, no. 2, 1980.

Subject:
A review of smoking cessation programs in occupational settings in the U.S. Programs include Campbell Soup Company (consultant at the worksite model), Ford Motor Company (self-help format), Dow Chemical Company (incentive model), and Johns-Mansville Company (blanket prohibition of smoking). The authors make recommendations concerning the development of successful worksite smoking health education interventions.

Target Audience:
Employees of companies in programs that were reviewed.

Channels of Communication:
Inter-personal education and support materials.

Sponsoring Agencies and Cost:
Campbell Soup Company, Ford Motors, Dow Chemical Company, Johns-Mansville, et al. The cost varies from program to program. Some programs were operated on a lottery system, some split the fee between workers and the employers, and others were a free component in health education programs.

Time Period:
This varied with programs. Some were 3 to 6 months, while others are ongoing programs.

Methodology:
Approaches varied from company to company. The Campbell Soup Company program in Camden, New Jersey, developed a working agreement with the Center for Behavioral Medicine at the University of Pennsylvania to provide a consultant to conduct a series of smoking cessation classes. Participants and the company split the fee of $50 ($20 to $30). At the time of this article, 255 of the participants were found to be abstinent.

An example of an inhouse program is at the Ford Motor Company World Headquarters within its corporate health education program. A pilot study was undertaken to test the efficacy of various self-help formats. Approximately 40% of the smokers involved in a corporate cardiovascular risk intervention program were invited to participate. Self-help groups were developed, composed of colleagues and friends who shared an interest in using one of three methods: regular-paced aversive smoking and self-control (26 persons in 6 groups), abrupt withdrawal with contingency contracting and self-control (22 persons in 4 groups), or gradual withdrawal using contingency contracting and self-control (10 persons in 4 groups). Each group elected a leader who helped see that weekly agenda topics were covered and that subsequent meetings were scheduled. Materials were provided by Ford in workbook form and included strategies and procedures from the behavioral program developed by Danaher and Lichtenstein. At a 6-month follow-up, 20 percent of the programs' participants were not smoking.

Incentive programs in which company-sponsored monetary rewards are systematically used to encourage nonsmoking have proved popular. One example of such a program is at the Texas operating division of the Dow Chemical Company. The company instituted the program after discovering that workdays lost by smokers cost the company an estimated $500,000. A one-year program was undertaken in which lotteries and financial awards were used. In one lottery aimed at smokers, every month of nonsmoking earned the novice ex-smoker one chance to win a boat and motor valued at $2,400. In the other, strictly monetary contest, weekly $1 bonuses were offered for abstinence, as well as a chance to win a $50 bonus quarterly. Almost 400 employees (24% of the smokers) participated, and at the end of the program an impressive 76% of these were abstinent.

An example of a program that prohibits smoking at work is the Johns-Mansville experiment in which the company banned smoking in two plants, one in Massachusetts and one in Texas. From experience gained in early encounters, the company has developed a five-point approach to converting plants from smoking to nonsmoking status: (a) provide employees with relevant health information, (b) arrange meetings to discuss smoking issues between local management and union representatives, (c) have management make a formal presentation directly to employees giving the proposed rationale for the smoking ban, (d) encourage workers to attend partially subsidized smoking cessation classes, and, finally, (e) institute the smoking ban. The ban was scheduled to be in effect by 1979 in all plants and to encompass a workforce of about 8,000 employees.

Outcomes and/or Recommendations:
Based on their review of program types, the authors make the following general recommendations:

- o Most smokers prefer a program that helps them quit and then helps them resist relapse.
- o Continuity of contact may be important in facilitating abstinence (either between ex-smoker and a program, or someone from the program).
- o A program should make alternative methods and materials available so that as large a population as possible can be reached.
- o The availability on the job of a lending library of printed and audiotaped materials is a cost-effective step since it can reduce the staff needed to run a program.

38. **Gredler, Brigitte, and M. Kunze. "Impact of a National Campaign on Smoking Attitudes and Patterns in Austria," International Journal of Health Education, Vol. XXIV, 1981-84.**

Subject:
The article reports results of a large scale anti-smoking campaign in Austria which included: an information campaign through the media, a "stop now" program for smokers wishing to break the habit, an accompanying program of research to determine the effectiveness of the campaign as a whole. Results were compared with those of previous smoking surveys among the population to determine any changes that had taken place in attitudes and bahavior patterns.

Target Audience:
All people in Austria.

Channels of Communication:
Mass and support media, including television, radio, newspapers, magazines, billboards, spots in movie theatres,, brochures with applications for self-help materials, and posters for doctor's offices.

Sponsoring Agencies and Cost:
The Federal Department of Health and Environmental Protection. U.S. $1.5 million, in addition, 1 million was provided free of charge by Austrian radio and television.

Time Period:
Fifteen months (17 November 1980 to 14 January 1981).

Methodology:
The initial phase of the campaign lasted for eight weeks, during which there were 85 television spots, 485 radio spots, 35 advertisements in newspapers, 38 in magazines, 64 in magazines for young people, 66 in movie theaters, and 2,695 billboards. Well-known nonsmokers appeared in the radio and television spots. Additional radio spots contained some medical information and statements for special target groups.

The second phase was geared towards smokers who wanted to stop. A brochure containing a cessation program based on behavior modification was mailed free of charge together with a sticker to all applicants. The self-help program was also promoted through doctors and medical institutions. All practicing physicians and all medical departments of hospitals, outpatient clinics, and laboratories received posters advertising the program, along with postcards for patients who wanted to receive the self-help program.

Evaluation of the campaign consisted of: representative population survey to check the impact on the epidemiology of smoking and attitudes towards the campaign and the tobacco; analysis of the self-help program (structure of users, success rate); survey among doctors to learn about their attitudes and experiences; and analysis of mass media news about the campaign and the smoking and health issue.

Outcomes and/or Recommendations:
The results of the evaluation showed:

- The campaign was recognized by 99% of the respondents (they knew or recalled the campaign slogan);
- After the campaign only 27% of those surveyed called themselves smokers, as compared to 34% before the campaign;
- Of all smokers, 59% were unhappy about the habit, 26% wanted to stop, 31% wanted to smoke less, and 3% planned to switch to a brand which contains less toxic substances;
- 86% of all doctors placed the posters in their offices;
- Sales of Austrian tobacco dropped by 2.2% in the first 3 months of 1981.

39. Cohen-Solal, Jean-Martin, "Anti-smoking Actions in France: Five Year Results," World Smoking and Health, Summer 1982.

Subject:
A national campaign to inform the French public about the dangers of smoking, including a special program for children from 9-11 years old.

Target Audience:
The entire population, and 9-11 year old school children in the special program.

Channels of Communication:
Mass and support media and formal school system.

Sponsoring Agencies and Cost:
The French Committee for Health Education, the National Center of Pedagogical Documentation, and the schools. Cost information was not provided.

Time Period:
This is an ongoing project which was started in 1976. The special program for 9-11 year olds was started in 1979.

Methodology:
Although the article does not describe the general campaign, it was launched in conjunction with a 1976 antismoking law which: prohibited all tobacco advertisements on television and radio, in the cinema, and in all forms of posters; required (within 2 years of the law's enactment) publication of the tar and nicotine content, as well as the words "abus dangereux" (overuse in hazardous) on all cigarette packages; completely prohibited smoking in certain public places and on public transportation, and provided information on smoking in schools and the army.

A pedagogical kit was prepared for the 9-11 year old school program which contained materials for the teacher and students. Activities included cards on 4 themes: effects of tobacco on the body, tobacco's dangers to health, the high cost of smoking, and "to smoke or not to smoke." The cards were accompanied by statistics from a survey of smokers and nonsmokers. Cartoons on "Lucky Luke," the smoker, were also included. Materials for the upper grades were being developed at the time of this article, in order to: enhance young people's knowledge of the harmfulness of smoking on health, and to make young people conscious of the psychological mechanisms which drive them to become smokers and thus reinforce their resistance to smoking. Other materials being developed are booklets on "Tobacco and Health," "Tobacco History," and "The First Cigarette," along with activities such as debates, group discussions, theatrical expression, and role-playing.

Outcomes and/or Recommendations:
Between 1976 and 1981 the following changes were noted:

- The number of smokers, aged 12 and older, decreased by more than 2 million individuals;
- The percentage of smokers in the population dropped from 44.2% to 38.7%;
- The most important decrease (from 60% to 50%) was found among male adults.

40. **Welsh, Gunther. "Smoking Cessation: A New Approach Through Secondary Prevention Strategies in the Federal Republic of Germany," International Journal of Health Education, Vol. XXIII, 1980/4.**

Subject:
A long-term smoking prevention program, developed in the Federal Republic of Germany, is reviewed after three years. (The program began in 1977.)

Target Audience:
Smokers, primarily.

Channels of Communication:
Support media, interpersonal communication, and formal school system.

Supporting Agencies and Cost:
The Federal Centre for Health Education, adult education institutions, public schools, and other institutions and organizations engaged in health education. Cost information was not provided.

Time Period:
A 10-week course of 90 minutes each.

Methodology:
For each individual week, the course leader gives the smoker not just documentation but also assignments to fulfill. A contract to stop or reduce smoking is made between the participant and the course leader. Money is lost by breaking a contract and can be won back under the next contract. Since smoking is an individual behavior, the first two weeks are devoted to an analysis of personal smoking from the viewpoints of quantity and situation. The smoker records each cigarette, before lighting up, on a small recording pad the size of a cigarette packet and works out the daily or weekly average. In the second week he also records the individual smoking situations. This activity, which the participants often find a nuisance, is extremely important for the analysis of personal smoking behavior and for determining the degree to which the terms of the contract have been upheld.

The course leader's tasks are to provide information, promote group work, and motivate the participants. Be means of "role games" he shows the participants how they can achieve more assured social behavior even without a cigarette. The Federal Centre supplies the "software" and other materials to collaborating institutions.

Outcomes and/or Recommendations:
After three years, the article reports the following:

- o 27% of the participants had a 0 consumption rate at the end of 2 years.
- o When stable reduction (0-50% reduction of cigarette consumption) is included, a success rate of 43% is achieved.
- o Of people who quit the program, 19% quit completely, and a 50% reduction was achieved by 29% of the group.

41. World Health Organization, Geneva, 1983. Technical Report Series, no. 695. "Smoking Control Strategies in Developing Countries."

Subject:
This article sets forth a series of smoking control strategies for developing countries.

Target Audience:
Ministries of Health and other interested institutions in developing countries.

Channels of Communication:
Mass media, support media, and government policy.

Sponsoring Agencies and Cost:
Sponsoring agency not mentioned. Cost information was not given.

Time Period:
Not discussed.

Methodology:
The article includes suggested guidelines on major and intermediate objectives for smoking programs, how to structure the program, needed data collection, the use of media, the use of legislation, and on the evaluation of programs.

Major long-term objectives which WHO recommends are: to illustrate the case for smoking control action; to prevent the onset of the smoking habit in the population; to change the smoking behavior and to reduce smoking rates in the population, and establish a social climate favorable to nonsmoking.

Recommended intermediate objectives include:

(a) to illustrate the case for smoking control action by:
  - o making the public aware of the consequences of smoking for the health of the individual smoker;
  - o making decision-makers aware of the consequences which smoking has on public health and the environment.

(b) to prevent the onset of smoking by:
  - o reducing influences conducive to smoking;
  - o strengthening individual resistance to influences conducive to smoking;
  - o increasing the attractiveness of nonsmoking.

(c) to change smoking behavior by:
  - o inducing smokers to perceive smoking as a personally relevant health risk;
  - o persuading smokers of the health benefits associated with smoking cessation;
  - o convincing smokers that to stop smoking is not impossible;
  - o inducing smokers to make a real change in their smoking habits, such as giving up cigarettes or at least reducing cigarette consumption;
  - o preventing relapse.

(d) to establish a social climate oriented towards nonsmoking by:
  - o creating public awareness of the social and health problems of passive smoking;
  - o protecting the rights of the nonsmoker;
  - o providing smoking-free areas;
  - o promoting a positive image of the nonsmoker;
  - o providing appropriate measures to permit food crop substitution for tobacco.

The information on structuring a program includes discussion on target setting, coordination, and the recommendation of various agencies and organizations which should be involved.

Recommended data collection should include information on:
  - o prevalence of the various kinds of tobacco use in different groups with respect to sex, age, area of residence, occupation, level of education, income, etc.;

- average consumption level of different groups of smokers;
- reasons for which the typical smoker started smoking;
- typical age at which tobacco use started in different cohorts;
- awareness among tobacco users of tobacco-related health risks;
- attitudes of tobacco users concerning their habit;
- reasons given for those who stop smoking; and
- perception among different groups of people (including nonsmokers) of the smoking habit and of smokers as individuals.

The article recommends coverage by mass media through the following sources:

- developing public service announcements for radio and television broadcast on a paid or unpaid basis;
- persuading broadcasters to include material supporting nonsmoking in regular programs;
- producing original anti-smoking programs for broadcast by radio and television, and writing letters, articles, and essays for publication in newspapers and magazines;
- staging events and arranging for television, radio, and newspaper coverage;
- ensuring that the membership of public information organizing committees includes representatives of radio, television, and the press.

In addition to the above media coverage, posters, pamphlets, comic-strip cartoons, cinema, and puppet shows are discussed as ways to promote nonsmoking. The proposed legislative measures for controlling smoking are included in the recommendations below, and evaluation techniques, according to the authors, should be adjusted to the objectives of the national program.

42. **Hurd, Peter C., Anderson Johnson, Terry Pechacek, L. Peter Bast, David Jacobs, and Russell Luepker. "Preventing Cigarette Smoking in Seventh Grade Students," Journal of Behavioral Medicine, Vol. 3, no. 1, 1980.**

Subject:
The article describes a project designed to prevent the onset of regular smoking among teenagers in a U.S. school district in the State of Minnesota. The project teaches students (1) to resist the social pressures to smoke, (2) to be aware of the immediate harmful effects of smoking, both social and physiological, and (3) to model their behavior after that of nonsmoking peer leaders and older role models.

Target Audience:
The entire population (1,636 students) of seventh graders in Minnesota Independent School District 281.

Channels of Communication:
Support media, interpersonal education, and formal school system. Materials included film video presentation, peer-made videos, and video statements of commitment, along with discussion groups.

Supporting Agencies and Cost:
The schools, along with cooperation and materials from the American Cancer Society. Cost information was not provided.

Time Period:
Six months.

Methodology:
Three interventions, involving a social pressures approach, a social pressures approach plus further discussion (personalization), and both of the above plus commitment, were pyramided from school to school so that schools were exposed to various proportions of the entire design.

The social pressures curriculum consisted of a combination of film/videotape presentations and group discussions. The first session was designed to present facts about the dangers of smoking and to start students thinking about social pressures to smoke. The second session included discussion groups in which students gave their estimates of the percentages from their own school who smoked, and learned that smokers were a small minority both in the 7th grade and in the adult population. The third session included the presentation of videotape showing scenes of students refusing to smoke, followed by active roleplaying. Following the tape, students role played situations where they were asked to smoke and wanted to refuse. The final session was designed to make students aware of media pressures to smoke and to help them develop counter arguments. This session also involved a videotape and roleplaying.

The personalization intervention included students who were chosen by fellow students in their health and science classes as students whose opinions they respected and who would be good at making an antismoking film at the university. The three most cited students from each class were selected after teachers validated the results. These students were then given some training at the university and developed videotapes which were used in sessions 3 and 4 in School IV where actors were classmates and in School III where they were unknown. Half of the students in School IV were asked to make a no-smoking commitment. This involved a written statement beginning "I'm not going to smoke because . . .," followed by videotaped presentations of student statements. Self-reported behavior was divided into four categories for analysis: nonsmokers, experimenters, smokers, and quitters.

Outcomes and/or Recommendations:
The authors of the article concluded that:

- The most successful of the interventions included the curricula on social pressures, along with personalization and commitment (School IV).
- Personalization, or the use of peers and student-generated materials increases student interest and participation, and may thus prove more effective than other materials.
- That since 12- and 13-year-olds are not usually addicted, this is a good time for prevention.
- Films emphasizing techniques for dealing with social pressure and videotapes of participants are successful interventions.

43. ________. International Journal of Health Education, Supplement to No. 4, Vol. XXII, Oct./Dec. 1979, pp. 1-29.

Subject:
Comprehensive Smoking Cessation Programme in Finland.

Target Audience:
The entire population with special emphasis on the middle-aged and male population due to their higher risk in this culture.

Channels of Communication:
Mass media, support media, and interpersonal education. The above consisted of a television smoking cessation course supplemented in some areas by newspaper, local radio, health centres, and voluntary study groups (self-help study groups).

Sponsoring Agencies and Cost:
The North Karelia Project, Finnish Television, Central Public Health Laboratory in Finland, and the National Board of Health. Local (county) health service offices cooperated, as well as volunteers (usually involving one local nurse) in the self-help groups. Costs of the television program were approximately $US 8,000.

Time Period:
The television program lasted four weeks with three sessions the first week, and four sessions on consecutive Mondays.

Methodology:
The program was well publicized by the news media in advance and throughout the program. Major voluntary public health organization also informed their members about the program. A serious attempt was made to encourage smokers to follow the course in organized groups. Practical printed advice was distributed to the lay leaders of these groups, who also received posters they could use at their place of work in their village, their club, or elsewhere, to encourage smokers to join their group. In addition, they received a simple record form for reporting on the group work and its success.

Each program featured a group of ten smokers in the studio, i.e., six men and four women, aged 20-60, all volunteers. Sessions were led by two experts from the North Karelia Project. Every session was filmed in the studio, with minimal editing, and consisted of a conventional smoking cessation course plus remarks and advice to viewers. The first session included background information, the smoking situation of the group, the reasons for stopping smoking, and the problems involved, At the end of the first program, smokers were advised to continue their normal smoking but to keep a record. The second session included a review of the smoking habits of group members, based on their own observations, followed by a "doctor's lesson" on the health hazards of smoking, with special emphasis on the physiological consequences for each smoker. At the end, people were asked to stop smoking that day, and advice about how to cope with problems was repeated. The third session also began with a review of the group members' smoking status, with examination of the factors associated with individual success or failure in efforts to stop. More information about health hazards was given. The fourth session began by emphasizing the positive symptoms of smoking cessation. This was followed by a more detailed discussion of diet and weight control, a simple relaxation session, and advice for the next interval. The fifth session began with the usual review of smoking status, but with more emphasis on positive experiences of group members. It was followed by general discussion on antismoking activities needed in society, including antismoking legislation, and a relaxation session. The sixth session was devoted to a filmed presentation of the half-year experience of the studio group. The final session reviewed the television group's half-year experience. Letters from viewers were read and commented upon, and people were given advice about long-term maintenance of the nonsmoking habit.

Outcomes and/or Recommendations:

- If the impact is related to the outcome observed, that of 10,000 people who have stopped smoking, the project gives a very favorable cost/benefit ratio: less than one US dollar per successful case.
- More than half the population saw at least one session of the program.
- Approximately 7% of the adult population saw at least four sessions.
- The program was mainly followed at home, in the family circle, and as much by smokers as nonsmokers.
- Data collected indicate that some 100,000 smokers (10% of all smokers) followed the program closely: over 20,000 (2%) of all smokers stopped smoking with the aid of the television program, and 10,000 succeeded for a period of at least six months, if not permanently.
- In spite of this success, direct impact on national smoking rates was limited.
- Male smokers who continued smoking did not change their daily consumption, but females did. (There was observable reduction in daily smoking, from 20 per day to 14.5 per day among women who smoked filter cigarettes.)
- The program received a lot of attention from the press.

44. Aaro, Leif Edvard, E. Bruland, A. Hauknes, and P.M. Lochsen. "Smoking among Norwegian Schoolchildren 1975-1980: The Effect of Anti-Smoking Campaigns," Scandinavian Journal of Psychology, 24, 1983, pp. 277-283.

Subject:

This is a comparison of two kinds of anti-smoking campaigns: one in which pupils and parents were actively involved, and the other where students were passive receivers of information on smoking.

Target Audience:

Schoolchildren, aged 12-15, in both urban and rural areas.

Channels of Communication:

Formal school system, interpersonal education, and support materials.

Supporting Agencies and Cost:

The National Council on Smoking and Health in Norway, along with teachers, parents, and in some cases, students. The authors do not give exact cost figures, but state that it is "probably cost-effective," because a small staff is needed to create the anti-smoking packets. The actual implementation is carried out by regular classroom teachers.

Time Period:

Five years, 1975-1980.

Methodology:

The National Council on Smoking and Health developed an "educational package" on smoking and health for schoolchildren consisting of three elements:

(1) A folder to the pupils describing the immediate effects of smoking on the organism. It also discussed smoking as a form of self pollution and tobacco as a waste of agricultural resources.
(2) A folder to the parents informing them that an anti-smoking campaign at school would probably have no effect without their active participation and support. They were also told how to communicate with their children during the campaign in order to increase the effect on the children's attitudes and behavior. Parents who smoked themselves were further asked to discuss smoking and health with their children. For example, rather than forbid their children to smoke, they were encouraged to discuss the problem with their children and help them to form their own attitudes.
(3) A guide to the teachers giving them brief instructions on how to engage students actively in the campaign.

The educational content behind the campaign can be described as follows: (a) greater emphasis on the immediate effects of smoking on the organism; (b) an attempt to link the tobacco and health issue with the present debate on pollution and waste of resources; (c) an intervention in the social network on the pupils through their parents; and (d) an active involvement of pupils in the tobacco and health education through writing an essay on smoking and health.

Packages were sent to 22 schools (these included a letter to the headmaster, brief instructions to teachers, and folders for pupils), and in some cases, folders were included for parents. Schools were divided into four clusters. Group I teachers were only asked to present and discuss folders in their classes; Group II included the above plus a written essay on the dangers of smoking for health; Group III included the parent folders which were distributed prior to teacher-pupil discussion of pupil folders and no written essay; and Group IV included all of the above aids/methods. The week-long campaigns were followed by questionnaires and interviews to determine how much knowledge, attitudes, parental engagement, and student opinion had changed. Evaluation of teachers was also conducted.

Outcomes and/or Recommendations:
Based on pre- and post-intervention questionnaires, the authors cite the following changes:

- Reductions in cigarette consumption were statistically significant in Groups II, III, and IV, with reduction greatest in Group IV.
- There was no significant difference in knowledge among the four groups, although the highest scores were achieved by Group IV.
- Group IV also scored highest on the attitudinal scale, although the differences among groups were not statistically significant.
- The correlation between attitudes and cigarette reduction was high, i.e., the more positive the attitude, the stronger the reduction in use of cigarettes.
- 13% of parents involved reported a change in opinion concerning smoking among children.
- Six months after the campaign, the percentage of smokers had decreased from 28% to 20% among boys and from 27% to 24% among girls.
- Based on the data, the authors also state that smoking seems to be more easily prevented among occasional smokers than those who are already smoking regularly.

45. **Alderman, Michael, Lawrence Green, and Brian Flynn.** **"Hypertension Control Programs in Occupational Settings,"** **Public Health Reports, Vol. 95, No. 2, 1980.**

Subject:
A review of hypertension education programs in occupational settings in the United States. (Evaluations conducted in conjunction with the National Heart, Lung, and Blood Institute.)

Target Audience:
Workers at various sites. (See individual program descriptions below.)

Channels of Communication:
Inter-personal education.

Sponsoring Agencies and Cost:
Work sites, along with the Chicago Heart Association, the University of Michigan, Cornell University Medical College, and eleven studies sponsored by the National Heart, Lung, and Blood Institute. Exact details of cost information were not provided.

Time Period:
See individual programs described below.

Methodology:
Eleven case studies were reviewed, for example:

- o Chicago Heart Association Project. This project collaborated with 84 industries, screening 37,714 eligible employees. After five years an evaluation revealed that although a high percentage of those at risk did see doctors, they had not achieved significant improvement in blood pressure control. They concluded that merely advising screenees with high blood pressure levels to see a physician was not sufficient to produce results. They modified the program to include more communication with control program staff, and to add five one-hour classes on cardiovascular disease at the workplace. However, only one half of those who sought care had achieved and maintained control of blood pressure after two years. Results suggest that although workplace screening is a convenient and economical way to detect hypertension, it does not necessarily lead to either participation in treatment or to improved control of blood pressure.

- o Michigan Worker Health Program. Researchers at the University of Michigan developed a worksite hypertension control program based on a coordinated detection, referral, and follow-up campaign. The program was carried out in collaboration with labor unions and management in several work settings, including sustained contact with both the worker and his/her physician after screening revealing high blood pressure. Follow-up efforts were conducted primarily by telephone and mail, and as a result, 88% of the successfully referred employees maintained satisfactory blood pressure control. The program demonstrates the necessity for systematic follow-up.

- The Burlington Industries Program. This well-planned educational program for management and workers resulted in 100% participation in the screening component of the program. After screening, those workers with elevated blood pressures were referred to doctors of their choice. The physicians received letters containing a record of the blood pressure readings and an offer to provide the worker with check-ups, education, and other services at the worksite with the cooperation of the physician. The study demonstrated the feasibility of cooperation between the community physicians, hypertensive employees, and staffs of worksite hypertension control programs.

Outcomes and/or Recommendations:

- Almost any intervention that provides more time for discussion between a health care provider and a hypertensive patient produces short-term improvement in blood pressure control. This was true in all eleven studies reviewed in the article.

- Frequency and continuity of contact between patient and health care provider resulted in greater blood pressure control.

- The eleven programs appear to have achieved varying levels of success, depending on the extent to which patients were actively or passively involved in setting goals for their own behavioral change. The most dramatic effects were achieved in studies in which the patient "contracted" with the health care provider for behavioral achievements.

- The involvement of a significant other person in addition to the patient and the provider was helpful in temporary reduction of blood pressure.

- Some of the studies found an improved effect when patients were taught to monitor their own blood pressure and to keep records of change. This seems to work through direct feedback and reinforcement.

- Programs will only justify their costs if they include efforts to ensure completion of referrals and treatment.

46. Puska, Pekka, Aulikki Nissinen, Jukka Salonen, and Jaakko Toumilehto. "Ten Years of the North Karelia Project: Results with Community-Based Prevention of Coronary Heart Disease," Scandinavian Journal of Social Medicine, 11: 65-68, 1983.

Subject:
A comprehensive program (community-based) to bring cardiovascular disease (CVD) under control throughout North Karelia, Finland.

Target Audience:
The whole population of North Karelia, Finland, which has among the highest rates of heart disease in the world. The study was particularly geared towards the male population. (The rate is not reported here.)

Channels of Communication:
Inter-personal education.

Sponsoring Agencies and Cost:
The National Public Health Institute, Kuopio University, and local health centers. Advice was also given by the World Health Organization. Exact cost not given. The authors do report that the costs "were modest, and observed savings through reduced disability payments."

Time Period:
Ten years, 1972-1982.

Methodology:
Specific objectives were to: find as many of the hypertensives as possible; establish uniform and appropriate diagnostic and therapeutic methods among physicians; to gather information about the epidemiology of hypertension and the function of health services; and, to control the blood pressure in as many cases as possible. The program was integrated into existing health care structures and authorized by health authorities. Special clinics were set up in each health clinic and were run by especially trained public health nurses who were responsible for the follow-up. Doctors and nurses were encouraged to give patients advice on reducing the risk factors such as smoking, high-serum cholesterol levels, and high blood pressure. Patients were encouraged to stop smoking, to modify their diets, and to have their blood pressure checked.

Outcomes and/or Recommendations:
- Daily smoking was reduced in men by 28 plus/minus 11%, and in women by 14 plus/minus 38%.
- Serum cholesterol was reduced in men by 3 plus/minus 2%, and in women by 1 plus/minus 2%.
- Systolic blood pressure was reduced in men by 3 plus/minus 2%, and in women by 5 plus/minus 1%.
- Diastolic blood pressure was decreased in men by 1 plus/minus 1%, and in women by 2 plus/minus 1%.
- The above information shows a significant decline in smoking and cholesterol in men, as well as positive results in blood pressure reduction. For women, results were significant in blood pressure reduction only.
- Mortality data from 1969-1979 has shown that age standardized coronary heart disease (CHD) mortality among the middle-aged male population of North Karelia decreased by 24% (12% nationally). Most of the decrease was after 1973. CHD decreased among women, too.

47. Iammarino, Nicholas, Armin D. Weinberg, and J. David Holcomb. "The State of School Heart Health Education: A Review of the Literature," Health Education Quarterly, Vol. 7 (4), 1980.

Subject:
The authors review the literature on: (1) incidence of cardiovascular risk factors in the school-age population in the U.S.; (2) the status of adolescent health and problems of motivation and their implications for health education; and (3) evaluations of current health education projects designed to change knowledge, attitudes, and/or behavior regarding heart health. The review primarily covers the past ten years.

Target Audience:
School-age children.

Channels of Communication:
Formal school system.

Sponsoring Agencies and Cost:
This review was sponsored in part by the National Heart, Lung, and Blood Institute, National Institute of Health. (Other agencies will be mentioned in descriptions of individual projects.) Cost information was not provided.

Time Period:
Varies with the project. (See project descriptions.)

Cost:
Cost information not given.

Methodology and Results/Outcomes:
The authors cite studies showing high levels of cholesterol to be a primary risk factor, along with obesity, lack of exercise, diabetes, and stress/personality type. They also present evidence that some of these problems may have already developed before the age of adulthood, while others may be prevented if health education in schools in provided and successful. They suggest that, based on research, as early as sixth grade students can be actively involved in their own health care.

The authors describe 14 programs aimed at the primary prevention of major chronic diseases beginning in childhood. They are:

1. Putting your Heart into the Curriculum. This is a National Heart Association curriculum guide for teachers which includes classroom activities that can be used within existing programs or can serve as the framework for developing a comprehensive health education program.

2. School Health Curriculum Project (SHCP). This program teaches health via the understanding of body systems. The curriculum includes learning experiences that emphasize health problems affecting the digestive tract, lungs, brain, and heart in the fourth to seventh grades. The heart unit has been evaluated positively in terms of its cognitive effects on the cardiovascular health knowledge of sixth grade students but not in seventh graders. A major difficulty with the project was its cost to schools, since the whole curriculum must be purchased.

3. "Know Your Body (KYB) Program". This program was developed by the American Health Foundation. The overall objectives of the KYB study are to identify major chronic disease risk factors in the school-age population, to reduce elevated risk status through a behavior change-oriented intervention program, and to provide reinforcement of healthy behavior so that risk reduction is maintained. The curriculum uses risk factor education and medical screening to stimulate student interest in the interrelationship between their bodies, their health habits, and their environment. The program has educated and screened 3,000 school children, 11-14 years of age, and has given them "health passports." This is followed by a multidimensional health education intervention program which tries to teach healthy behavior patterns including self-responsibility for health. This program is also costly, due to the expense of numerous screening tests performed.

4. Joint parent-child behavioral change programs also seem promising, according to the authors. They do not name the program described, but children were screened, and those with the greatest risk were given an educational intervention consisting of classwork and home practice in food preparation, cholesterol control, weight control, and smoking cessation. Results showed a significant reduction of the behaviors associated with risk.

5. "How's Your Plumbing". This program is an instructional module on the cardiovascular system for junior high school science classes. It was developed for the schools in Frederick County, Maryland, and consists of activities which can be performed individually or as a class.

6. "Phono Cardio Scan" is an analog digital computer which is used with elementary school children in conjunction with the local Heart Association and school nurses. Children with high risk are referred to their family physicians.

7. "Peabody Massachusetts Public Schools and American Heart Association Affiliate guide for Heart Health Curriculum." The focus of this program was general heart health, and more specifically hypertension, for sixth graders. Activities taught children to check their own blood pressures, to know the major related heart health risk factors and what to do to reduce risk, and tried to make children aware of their own responsibility for heart health. Children were capable of learning the above, although the authors do not report on behavior change.

8. "Cardiovascular Nutrition Education Program". This program was designed to teach high school biology students about cardiovascular nutrition, attitudes, and dietary habits. Students were screened for cholesterol and hypertension during a three-week "Heart Awareness Program." The program was evaluated for its effect on student's knowledge, attitudes, reported eating behavior, and cholesterol levels. There was a significant improvement in nutrition knowledge related to heart disease and attitudes toward a low cholesterol pattern of eating. A significant change in eating behavior was also noted. However, the rise in cholesterol levels one year later was similar to that in the control group.

9. "Fifth Grade Nutrition-oriented Heart Health Education Program". This program measured students on the following variables: actual eating and exercise behavior while at school, reported exercise and eating behavior at home, knowledge, and reference for heart health foods. The program was successful in all areas except in changing students' level of exercise. It also seemed to solicit favorable responses from parents.

10. "Heart Health Profile (HHP)". This is a test instrument designed to analyze multivariate criteria in relation to coronary heart disease. The criterion include: family history, body fat, Type A personality, diet content, exercise, smoking, and relaxation habits. The first version relied on self-reported written information, but subsequently biomedical indicators were added. Now students are convinced that their reported values will be confirmed by biomedical validity measures, and reporting seems to be much more valid.

11. "Cardiovascular Curriculum Education Project (CCEP)". This curriculum was developed by the School Health Section of the National Heart and Blood Vessel Research and Demonstration Center at Baylor College of Medicine. The curriculum is divided into three major components:

a. Core Units: Your Circulatory System; Your Heart; Cardiovascular Diseases; Risks of Cardiovascular Disease; Warning Signs; etc.
b. Supplemental Units on Individual Risk Factors such as Diet, Smoking, Hypertension, Exercise, Obesity, and Stress.
c. Teacher's Guidebook.

12. "Health Activities Project (HAP)". The project involves fourth to eighth grade students with their own health and safety through over 60 hands-on discovery approach activities to make students aware of the control they have over their own bodies. These include units and activities on heart health.

13. "The Sunflower Project" involves the total school and community and focuses on the elementary school age child. It uses a modular approach with background material, pre- and post-test, and learning activities. The four modules include nutrition, physical fitness, cardiovascular health, and respiratory health. The cardiovascular unit focuses on the functioning of the heart and values clarification designed to teach students personal responsibility in maintaining proper heart function. Evaluations were being conducted at the time this article was written.

14. "The Virginia School Blood Pressure Education Model" was designed to enhance students' cardiovascular health knowledge and improve health care. Instructional techniques used were demonstrations and hands-on experiences rather than traditional lecture methods. An evaluation of the program using sixth grade students focused on a student questionnaire and student ability in taking accurate blood pressure. The study group achieved significantly higher pre- and post-test scores; however, some aspects of the instruction did prove weak and are being improved.

Recommendations:

Based on the literature review, Iammarino, et al., make the following recommendations:

- o That the cardiovascular education of young people is needed, as problems in heart health can develop early.
- o That the programs described have proved successful in some aspects and should be used and improved upon.
- o That adolescents do not have sufficient knowledge about heart health and the prevention of cardiovascular disease.
- o That research demonstrates that educational programs (some mentioned above) can be used to increase health knowledge and promote positive attitudes.
- o That some programs have encouraged behavioral change.
- o That currently many programs are too expensive to become integral parts of the curriculum. (Costs are not compared.)
- o That more research on behavior change and when to introduce education programs, as well as experimentation with different programs to see what work must be conducted.

48. **Menotti, Alessandro. "The European Multifactorial Preventive Trial of Coronary Heart Disease: Four Year Experience," Preventive Medicine, 12, 1983.**

Subject:
The World Health Organization's European Multifactorial Preventive Trial of Coronary Heart Disease is one of the large controlled preventive trials of coronary heart disease (CHD) started in the early 1970s and based on the hypothesis of the reversibility of coronary risk in middle-aged men. The purposes of the trial were to assess whether: (a) the major coronary risk factors, namely, serum cholesterol, high blood pressure, cigarette smoking, and secondarily, body weight and physical inactivity, could be modified in a substantial and permanent way; and (b) whether such changes, if any, were accompanied by a reduction of CHD incidence and death over six years. Countries which participated in the trials were Belgium, Italy, Poland, Spain, and the United Kingdom.

Target Audience:
Over 63,000 men aged 40-59, in a total of 44 pairs of factories.

Channels of Communication:
Inter-personal education and support media.

Sponsoring Agencies and Cost:
The Regional Office for Europe of the World Health Organization in Copenhagen and various groups within the five countries. (These are discussed in individual country studies.) Costs were not reported.

Time Period:
Six Years.

Methodology:
The overall structure of the project included the following steps:
- o Entry screening offered to all men in treatment factories;
- o Entry screening offered to a 10% random sample (more than that in Italy) of men in control factories;

- Intensive preventive action on an individual basis in order to modify risk factor levels in men belonging to the upper 15% of entry score, based on five risk factors (those mentioned above);
- General health education offered to all remaining men belonging to treatment factories (including the distribution of booklets and posters, films, group discussions, etc.);
- Annual rescreening of high risk men and of a 10% random sample of treatment factories;
- Biennial rescreening at 2nd and 4th anniversary of the same original 10% random sample of treatment factories;
- Continuous monitoring of nonfatal cardiovascular events, based on absenteeism from work and subsequent check of each suspect diagnosis;
- Continuous monitoring of all deaths and their causes;
- Final screening after 6 years offered to all men still at work in both control and treatment factories.

Those identified as relatively high risk were treated by teams including doctors, technicians, and/or nurses (teams varied from country to country) with advice for cholesterol lowering diet, smoking cessation, regular exercise, weight reduction, and drug control of hypertension.

Outcomes and/or Recommendations:

Changes in participating centers varied considerably. Pooled data showed:

- A net reduction of 2.5% random sample (RS) and 5.8% high risk (HR) for serum cholesterol;
- A reduction of 1.3% (RS) and 2.6% (HR) for systolic blood pressure;
- A reduction of .5% (RS) and .9% (HR) for body weight, and
- A reduction of 8.8% (RS) and 15.2% (HR) for cigarette consumption.
- The net reduction of coronary risk estimated by a multiple logistic equation was 12% in RS and 17% in HR.
- Differences in centers in results may reflect the different local situations. (More information on this is given in the individual country studies.)
- The modest risk factor changes have been of the same order as those in earlier large studies of community intervention programs (i.e., the Stanford and North Karelia programs).

49. Maccoby, Nathan, John Farquhar, Peter Wood, and Janet Alexander. "Reducing the Risk of Cardiovascular Disease: Effects of a Community-Based Campaign on Knowledge and Behavior," Journal of Community Health, Vol. 3, no. 2, 1977.

Subject:

The authors describe a Stanford Heart Disease Prevention Program conducted in two California communities (Watsonville and Gilroy). A multimedia campaign was conducted in both communities, with a third community (Tracy) serving as a control. The campaigns were designed to increase participants' knowledge of the risk factors for cardiovascular disease, to change such risk-producing behavior as cigarette smoking, and to decrease the participants' dietary intake of calories, salt, sugar, saturated fat, and cholesterol. Interpersonal education, when combined with the mass-media campaign in one of the communities, emerged as the most effective for participants initially evaluated to be at high risk.

Target Audience:
High-risk adults between the ages of 35-59.

Channels of Communications:
Mass and support media (television, radio, posters, etc.) and inter-personal education with support media.

Sponsoring Agencies and Cost:
The Stanford Heart Disease Prevention Program through grants to the Stanford Specialized Center for Research in Arteriosclerosis and to the Stanford Lipid Research Clinic from the National Heart, Lung, and Blood Institute. Cost information was not provided.

Time Period:
Two years.

Methodology:
A family-community model, rather than the medical center model, was chosen, since a community would be able to provide the milieu in which support and mutual help could develop and more naturally promote behavioral change.

A quasi-experimental design on a small number of experimental units was chosen. Of the two intervention communities, Gilroy was selected for a media-only approach, Watsonville for the intensive face-to-face instruction plus the mass media program, and Tracy was chosen as the control community. To assess the effects of the interventions, sample surveys were conducted to gather baseline and yearly follow-up data from a random sample of adults in the three towns. The initial survey took place just prior to the first campaign year in the fall of 1972. Follow-up surveys took place at the end of each of the two campaign years, in the fall of 1973 and 1974. Each survey included a behavioral interview and a medical examination of each subject.

The behavioral survey covered the subject's knowledge of risk factors related to cardiovascular disease, his/her attitudes toward the disease and towards modifying risk-promoting behavior in the areas of diet, weight, smoking, and exercise. The medical examination included measures of plasma cholesterol and triglyceride concentrations, blood pressure, relative weight, and electrocardiograms. Persons in the three communities who were found to be in the top quartile according to the above measure of risk were selected for special study.

The mass media campaign was presented in both Spanish and English, since there was a sizeable Spanish-speaking population. A variety of materials was produced for the campaign, including about 100 radio spots, several hours of radio programming, three hours of television programs and over 50 television spots, weekly newspaper columns, and newspaper advertisements and stories. Printed materials were also sent via mail, and posters were used in buses, stores, and worksites. The program was modified and monitored throughout, through a team of individuals skilled in the behavioral sciences, media production, and cardiovascular epidemiology.

The intensive-instruction program was given to the selected individuals and their spouses in a ten-week program of weekly and then twice-a-month sessions, in small groups of 12 to 15 participants. Some individuals received Stanford counselor at-home visits in which they received individual treatment sessions. Instruction was given under the guidance of the behavioral scientists and dieticians. Most therapists had college degrees in the liberal arts and were trained for a four-week period at Stanford in counseling methods. Two therapists were graduate students in the Department of Communications at Stanford who were well versed in the behavioral sciences and communication techniques. The content was one of behavior modification following five general steps: (1) an analysis of the participants' behavior; (2) modeling of the new behaviors; (3) guided practice in the new behaviors; (4) artificial reinforcement in the new behaviors from instructions; and (5) maintenance of the new habits without artificial reinforcement.

Outcomes and/or Recommendations:

- Statistically significant gains in the participants' knowledge about risk factors occurred in all interventions and gains were maintained through the second year. Mass media were shown to be effective in producing stable knowledge gains. However, where intensive instruction was added, the percentage gain was greatly improved.
- Only for the community that included intensive instruction was there a substantial reduction in the mean number of cigarettes smoked per day.
- The more the study participants learned, the more they changed their behavior.

50. **SerVaas, Beurt, and Myron Weinberger. "The Use of Multi-Media Motivation in Enhancing Compliance of Hypertensives Discovered at a Screening Operation," American Journal of Public Health, Vol. 69, no. 4, 1979.**

Subject:
A program to make use of multi-media packages to encourage subjects who need medical care related to hypertension to seek help. The study was conducted in Indianapolis, Marion County, and the State of Indiana, U.S., among employees of governmental agencies at all three levels in order to achieve a demographic cross-section of the respective employed population.

Target Audience:
12,881 employees of city, county, and state governmental agencies in Indiana, U.S.A.

Channels of Communication:
Support media and inter-personal education through videotapes, health counseling, and educational brochures.

Sponsoring Agencies and Cost:
The Marion County Medical Association, and in part by a grant from the Indiana State Board of Health and the United States Public Health Service. Cost information was not provided.

Time Period:
Six weeks (after the screening and referral).

Methodology:

Blood pressure measurements were taken. Normal blood pressure was defined as less than 145/90 for individuals less than 30 years of age and less than 150/95 for those over 30. Individuals with excessive levels were sent to the nurse/supervisor for alternate assignment to a Standard Referral Group (SRG) or the Motivated Referral Group (MRG). Individuals in the SRG were told that their blood pressure was elevated, that it was a potential health problem, and that they should consult their physician for further evaluation. They were given an educational brochure about hypertension and a referral card for their physician.

Individuals in the MRG viewed the videotape on problems, solutions, and consequences of not seeking solutions to hypertension. A health counselor then offered to answer questions and make an appointment with the individual's physician. A list of doctors in the area who would take on new patients was also provided. The individual was also given an educational brochure, a referral card for the physician, and a six-week follow-up phone call to reinforce the need to seek medical care.

Outcomes and/or Recommendations:

- Of the 12,881 employees, 6,637 (51.5%) presented themselves for screening.
- The SRG approach was not very effective in leading patients to seek medical care, as is evidenced by a compliance rate of 28.6%.
- The MRG group compliance was significantly higher--a 79% response rate.
- It is not possible with the design used here to determine the exact components in the program which led to the increased compliance rate.

51. Rose, Geoffrey, H.D. Tunstall-Pedoe, and R.F. Heller. "UK Heart Disease Prevention Project Incidence and Mortality Results," The Lancet, May 14, 1983.

Subject:
The authors report the results from the UK center of the World Health Organization's European Collaborative Trial in Multifactorial Prevention of Coronary Heart Disease. Participants from 24 factories were given advice on cholesterol-lowering diets, smoking cessation, weight control, exercise, and treatment for hypertension. Advice was given by the staff of the factory medical departments, with some supplementation from a visiting central team.

Target Audience:
18,210 men between the ages of 40-59 who were employed in 24 factories.

Channels of Communication:
Interpersonal Education which was supplemented by letters, booklets, posters, and films.

Sponsoring Agencies and Cost:
The WHO Collaborative Group, the 24 factories, and a team of specially trained nurses from the department of epidemiology in St. Mary's Hospital Medical School, London. The WHO Collaborative Group is composed of five European countries who are studying the multifactorial prevention of coronary heart disease. The five centers are autonomous, yet adopted a common protocol in order to pool combined results and analyze and contrast the national findings. Cost information was not provided.

Time Period:
6 years.

Methodology:
Factories were arranged in pairs, matched so far as possible for size, nature of industry, and region, and in each pair one was randomly selected for the intervention program. All male employees in the relevant age groups were invited to a screening examination which was conducted by a visiting team of specially trained nurses based at the coordinating center at St. Mary's Hospital Medical School, London. In each factory men with the highest levels of multifactor risk (13% of the total) received more intensive advice personally from the company physician (usually three consultations over the next year, each lasting about 15 minutes). There was also a general program of information and propaganda, supported by personal letters, booklets, posters, and films.

Information given participants included: (1) cholesterol-lowering information mainly based on reducing saturated fat and cholesterol intake, with encouragement to prefer using oils and soft margarines instead of hard fats; (2) cessation of smoking; (3) weight reduction for those 15% overweight; (4) exercise (a brisk walk or callisthenics daily for the sedentary); (5) control of hypertension for those with mean systolic pressure of 160 mm Hg or above, usually in the first instance by "Neo-NaClex-K" (bendrofluazide 2.5 mg + potassium) 1-2 tablets daily.

Evaluation included the monitoring of changes in risk factors by reexamination of random samples of the population.

Outcomes and/or Recommendations:

- Self-reported cigarette smoking was reduced moderately, in all men by a net average of 16% (cigaretttes per day), and in the high risk group, the number of cigarettes per day was reduced by 19%.
- The % of smokers was decreased by 4% in all men and 10% in the high risk group.
- Changes in other risk factors were small and not well-sustained.
- Larger changes in risk factors were obtained in other centers of the WHO Collaborative Trial, amounting in Belgium to an overall net reduction of 16% in estimated coronary risk, compared with 4% in the UK center.

52. Kornitzer, M.G. DeBacker, M. Dramaix, F. Kittel, C. Thilly, M. Graffar, and K. Vuyesteek. "Belgian Heart Disease Prevention Project: Incidence and Mortality Results", The Lancet, May 14, 1983.

Subject:
Authors discuss the Belgian part of a WHO European Collaborative Trial in the Multifactorial Prevention of Coronary Heart Disease. (Other countries participating are: Spain, Italy, Poland, and the United Kingdom). As in the other participating countries, the intervention package consisted largely of health education promoting a cholesterol-lowering diet, smoking cessation, weight control, physical activity, and treatment of arterial hypertension. A program of information was supplemented by counselling at the workplace by two physicians attached to the project.

Target Audience:
19,409 men, aged 40-59, who were employed in thirty factories.

Channels of Communication:
Interpersonal communication.

Sponsoring Agencies and Cost:
The WHO Collaborative Group, factories, the University of Brussels and the University of Ghent. Cost information was not provided.

Time Period:
6 years.

Methodology:
The above program was implemented with high-risk subjects invited for preventive counseling three times during the first year, twice in the second, and yearly thereafter. In several factories which contained a canteen serving hot meals, a dietician evaluated nutritional habits and advised the chef on reduction of total calories, saturated fats, and cholesterol. Screening and follow-up evaluations were conducted. Since only half the defined hypertensive subjects (systolic pressure greater than 160 mm Hg, average of 4 readings) were in the high-risk group the other half were invited during the first year for advice concerning their hypertension and were referred to their general physician for drug treatment.

Outcomes and/or Recommendations:

- The coronary risk profile was reduced in the intervention group, compared with that in the control group, especially during the first four years, by effects on serum cholesterol, number of cigarettes smoked daily, and blood pressure.
- Coronary mortality was reduced in the intervention group by 20.8%.
- For two of the three major end-points--total mortality and CHD incidence--there was a significant difference between intervention and control groups.
- The Belgian project achieved better results in terms of over-all risk factor modification than the UK project. It is difficult to pinpoint the exact cause of the difference, although one clue could be the difference in the source of intervention and advice: the Belgian

project used a permanent staff of physicians attached to the project, while the UK group relied almost totally on occupational medical staff.

- Researchers concluded that the counseling of middle-aged men at the workplace can lead to significantly reduced total mortality and coronary incidence.
- They also suggest that factory physicians might widen their activities from the prevention of specific work-related illness to the prevention of major chronic diseases.

53. **Roccella, Edward J., and Graham Ward. "The National High Blood Pressure Education Program: A Description of Its Utility as a Generic Program Model," Health Education Quarterly, Vol. II (3), 1984.**

Subject:
A large-scale community-based intervention program to reduce high blood pressure in the United States.

Target Audience:
The general public, health professionals, and hypertensive patients.

Channels of Communication:
Mass media, support media, and interpersonal education. High Blood Pressure Month kits which suggested newspaper articles, press releases, posters, etc., were developed for service agencies and offices. Mass media approaches using television, radio, advertisements, posters, billboards, booklets, and films were used to reach the general public.

Sponsoring Agencies and Cost:
The National Heart, Lung, and Blood Institute, the National Institutes of Health, 15 federal agencies, 150 national organizations, 50 state health departments, and some 2,000 community agencies and other facilitating groups. Cost information was not given.

Methodology:
The program, which uses multiple methods of information dissemination, is aimed at distributing information on diet, exercise, stress, hypertension, cigarette smoking, weight control, and other factors affecting the prevention of arteriosclerosis and other cardiovascular diseases. Early emphasis was on increasing the level of awareness of the need for high blood pressure control among people who were hypertensive.

Because of results in the 1974-75 time period which showed that many more hypertensives were aware of their condition, but the percent of controlled hypertensives remained almost the same as in the 1971-72 period, planners shifted the educational emphasis of the program away from the detection and screening efforts designed to increase awareness, and began to emphasize long-term therapy, maintenance, and control of high blood pressure.

Outreach included a variety of means. Channels to move information to professional audiences included: publication in the scientific literature, direct mail, editorial comment in both professional and lay mass media, and conferences. Devices to raise public and patient awareness and interest included the National High Blood Pressure Month (every May), High Blood Pressure Month kits, advertising, mass media campaigns including "white papers" on high blood pressure control information and education strategies for messages to public and patient audiences.

The general characteristics used to define communications channels included: (1) program access to the channel; (2) credibility of the channel to the user; (3) number of target groups reached by the channel; (4) simultaneity of the channel (how many target groups reached about the same time); (5) compatibility of the channel with other channels to be used to reach the same target group; (6) ability of a channel to tailor information to a specific group; (7) amount of information a channel can carry as a single package; and (8) cost of air time.

Outcomes and/or Recommendations:

Early evaluation efforts included a national baseline survey of public knowledge, attitudes, and reported behavior; a national survey of physician response to high blood pressure detection, therapy, selection, and management; examination of risk, prevalence, and control data; prescribing patterns data and patient visit data. Later efforts have included gathering and analysis of data from more recent clinical trials such as the Hypertension Detection and Follow-up Program, the Multiple Risk Factor Intervention Trial, and both the Australian and U.S. Public Health Service Hospitals' mild hypertension studies.

Results at the time of this article showed:

- 1976-80 results showed that the percent of hypertensives controlling their blood pressure more than doubled from 1971-72 (from 16.5 to 34.1%).
- Other sources also suggested positive trends in blood pressure knowledge and control. Three national surveys of public knowledge, attitudes, and reported behavior--conducted in 1973, 1979, and 1982—showed that almost everyone in the U.S. had had their blood pressure checked at least once, and the percent that had it checked within the previous 6 months rose from 57% in 1973 to 72% in 1982.
- The proportion of respondents knowing that "hypertension" means "high blood pressure" increased from 24% in 1973 to 55% in 1982.
- The proportion of hypertensives who were aware that treatment must be maintained in order to be effective rose to 92% by 1982 (from 87% in 1973).
- Further evidence of increased public knowledge about hypertension is the percent of persons who stated that high blood pressure is a cause of strokes and heart attacks--from 29% in 1973 to 66% in 1982, and for heart attacks from 24% in 1973 to 77% in 1982.
- From 1970 to 1983, visits to physicians for hypertension increased almost 68%, whereas visits for all causes remained relatively stable.
- There has also been a decline in age-adjusted death rates for stroke and coronary heart disease. Coronary heart disease mortality fell 27% between 1972 and 1982. The death rate for stroke dropped 44% during the same period.
- Because coronary heart disease and stroke account for almost one-half of all deaths in the U.S.A. annually, this decline has had a substantial impact on life expectancy.

54. Van Parija, L.G., and S. Eckhardt. "Public Education in Primary and Secondary Cancer Prevention," HYGIE, Vol. III, No. 3, 1984.

Subject:
The article reviews the literature on public education for cancer prevention in order to answer the questions: Have the programs been successful, and if so, why? The authors review four types of public education programs in cancer prevention which reflect the main and distinct goals of cancer prevention. One type is designed to develop basic knowledge about cancer and realistic attitudes towards the disease including changing misconceptions about the disease and a pessimistic outlook on prevention and cure. The second set of programs deals with encouraging healthylifestyle or modifying risk practices with smoking as a prime example. Thirdly, some programs try to teach people simple self-care skills for cancer prevention, such as Breast Self Examination (BSE) and oral/facial self examination. The final type of program reviewed is one which addresses the issue of participation, especially of high-risk groups, in cancer screening and of people not seeking professional help until after signs of cancer have been detected.

Target Audience:
All populations.

Channels of Communication:
All types: support media, mass media, face to face, inter-personal education, and formal schools.

Sponsoring Agencies and Cost:
No specific agencies are mentioned; cost information was not provided.

Time Period:
Not discussed.

Methodology:
The article divides the literature into four types of programs:

1. Cancer Awareness and Information Programs. The authors say that schools are a more accessible medium than the family to advance learning about cancer. Most school programs have the following goals: increase knowledge about cancer and about health enhancing behaviors; influence positive attitudes about cancer; dispel predisposed negative feelings related to myths and misconceptions; influence the lack of specific skills to lower the risk for particular cancers; influence negative and uninformed judgments about cancer made by peers and adults and help teachers become informed transmitters of cancer education information. The above is exemplified by the curriculum of Washington, D.C., schools. Different programs should be offered at the appropriate age levels, i.e., at the primary level, emphasis is on understanding one's body and how to take care of it. At the secondary level, the student learns basic biological aspects of cancer and the risks of

cigarette smoking and how to cope with social pressures from parents, friends, or the media.

Action outside the schools in public awareness and information programs is most often taken by cancer societies, governments, and the media. such programs have produced such results as: after seven years of public education, 56% of women believed cervix cancer could be prevented as compared to an earlier 32%. (Manchester Regional Committee on Cancer, 1974); awareness of the risk of smoking in the U.S. doubled in 15 years (from 40 to 80%).

2. Changing Risk Behavior. The single most important risk behavior in cancer prevention is nicotine consumption, and WHO has given priority to programs to discourage smoking, betel chewing, and other forms of nicotine consumption. These programs are sponsored by government bodies and cancer societies, and have been successful in Finland, Norway, etc. In Finland, the number of smokers among young people declined from 32 to 25%.

3. Learning Self-Examination Skills. Some programs have taught self-examination for detecting cancer early, i.e., for breast cancer, cancer of the oral cavity and the face, and a test for colo-rectal cancer. Cultural values may influence Breast Self-Examination. More women show knowledge about and claim practice of BSE in the U.S., but more studies need to be conducted on the frequency of practicing BSE and the correctness of the practice both in the U.S. and elsewhere.

4. Participation of Groups at Risk in Early Cancer Detection. Early detection will not influence cancer incidence, but may reduce cancer mortality. At risk programs seem to have worked in the U.S., U.K., and elsewhere. More women regularly have pap-tests now, and rates for oral and colo-rectal cancer have declined. Those who do not participate in early detection tend to be older or less educated, or have a lower income. Other variables affecting participation rates reported in several studies are: knowledge of the cancer and its symptoms, the accessibility of screening services and attitudes of health workers towards encouraging participation.

Outcomes and/or Recommendations:

Recommended Guidelines for Cancer Education Programs:

- The general goal of cancer education should be the informing of the public about cancer risks, the teaching of skills as to how to prevent cancer, and motivating the community to actively fight cancer.
- Priorities in cancer education should be based on the prevalence of cancer types and on the feasibility and yield of simple education interventions.
- Each school should have a cancer education curriculum at primary and secondary level with the program taught by the teacher with suitable teaching-learning materials.
- Mass media should continue to play a prominent role in informing and motivating the public about cancer prevention. Mass media programs not only reach the public directly, but motivate "intermediate groups,"

such as voluntary societies, women's groups, workers' organizations, cancer patient groups, etc., who can extend and reinforce large-scale education programs.

- The methods used (mass media, group methods, or personal contacts) should be selected on the basis of public education goals derived from baseline data on public attitudes, opinions, and practices, and how these may be achieved.
- Specific attention should be given to the continuity or maintenance of preventive practices once they are adopted. This calls for long-term education and for measures to support preventive practices in the social environment either through social support or through counteracting measures against adverse and misleading propaganda. In the long run, cancer education should aim at the development of a social climate conducive to healthy lifestyles and prevention habits.
- Close collaboration must be established between medical and behavioral scientists in order to produce common approaches to cancer education.
- Efforts should be made to complement curricula of undergraduate and postgraduate medical training programs and curricula of nursing schools with cancer education theory and practice.
- Cancer control programs should retain simple, cost-effective measures which can be readily applied in outreach areas at minimum cost. BSE practice and oral/facial examinations are simple and can be performed by nonhealth personnel if the culture permits. However, further studies are required to find inexpensive ways for improving and monitoring the correctness of the practice and maintaining the practice over the years.
- A national focus in cancer education, for example, a steering committee, is essential to provide leadership to groups and individuals active in cancer education. A centralized resource center to provide cancer education materials, texts, and speakers is an essential service to persons and agencies involved in cancer education.

55. Hilborne, Lee H., and Melanie Wolf-Greenberg. "Student Directed Projects in Cancer Education: Eight Years Experience in California," Journal of School Health, Vol. 53, No. 8, 1983.

Subject:
The "Biology of Cancer" course was introduced in 1973 at the University of California at Santa Cruz, and became so popular that the California Division of the American Cancer Society decided to support it state-wide. The course, as of 1981, was given at 27 colleges and universities in California, and is now being promoted nationally. The program has been designed to educate individuals about cancer, about how to prevent it, and about how to detect it at an early stage.

Target Audience:
College students.

Channels of Communication:
Formal schools (colleges and universities), using guest lectures, special presentations by cancer patients and their families, and course materials.

Sponsoring Agencies and Cost:
California Division of the American Cancer Society. Average cost per learning hour is US 4.5 cents, and cost per program is $542.00.

Time Period:
One school quarter or semester.

Methodology:
The course introduces students to cancer's multidimensional nature for one school quarter or semester. Guest lecturers are invited to discuss topics on which they have expertise, i.e., smoking and lung cancer, biological aspects of cancer, etc. Special presentations are made by panels of patients and their families to share their personal experiences. All courses cover epidemiological, biological, clinical, and psychosocial aspects of cancer. The focus and difficulty of the course depends on the department and instructor sponsoring the course. The focus of the course in a life science department, for example, emphasizes the biological aspects of the disease. Perhaps a major reason for the success of the program is that students play a large role in organizing the courses. They are responsible for selecting speakers, topics, arranging times, preparing and administering examinations, and recruiting student volunteers to repeat the process for subsequent years. The student coordinating committee usually consists of 2-15 students who work with a faculty advisor and the local American Cancer Society unit.

Outcomes and/or Recommendations:

- o Student directed programs in cancer education are an effective way to provide many sectors of the population (i.e., secondary school students, college and university students, and community members) with essential cancer information.
- o Courses should remain flexible, as in this study, so that they can be adapted to the needs of each audience.

56. **Iammarino, Nicholas, and Armin Weinberg.** "Cancer Prevention in the Schools," Journal of School Health, Vol. 55, No. 3, 1985.

Subject:
The authors point out that 145,000 people with cancer will die this year because they did not receive early diagnosis and treatment. In order to alter this situation, the authors have reviewed the literature, specifically in relation to children and adolescents, concerning the background of cancer prevention; knowledge and attitudes of adolescents concerning cancer; cancer curricula, programs, and educational materials for adolescents, and a justification for cancer education in schools in the U.S.

Target Audience:
Children and adolescents.

Channels of Communication:
Formal schools.

Sponsoring Agencies and Cost:
American Cancer Society and State Departments of Education. For Project CHOICE, one example, the cost for the whole program is $3,000.

Time Period:
Varies from integrating cancer education into regular classes throughout the 12 years of public schooling, to special, concentrated units of two weeks at various times, for example, right before adolescence for lung cancer and smoking.

Methodology:
Using data from previous studies, the seven risk factors most applicable to educational intervention are: tobacco (lung cancer), alcohol (upper aerodigestive trace and esophagus, and, perhaps liver cancer), diet (effects of carcinogens and obesity), reproductive and sexual behavior (uterine and breast cancer), pollution (affects of carcinogens), radiation (cancer from exposure to ionizing radiation), and sunlight (skin cancer). Some of the most widely used programs and curricula are: the School Health Curriculum Project, Know Your Body, and Project CHOICE. All of these have been widely used, evaluated, and found to be successful. For example, Project CHOICE is a K-12 curriculum developed by the Fred Hutchinson Cancer Research Center and the Washington State Superintendent of Public Instruction. It consists of units in three areas: (1) cancer information and components of risk, (2) information evaluation and decision-making, and (3) responsibility for behaviors leading to cancer risk reduction and wellness. Lessons are "student-activity oriented" rather than "teacher lecture-oriented" and include film strips, experiments, decision-making scenarios, group work class reports, debates, and discussion. Individual grade units and kits of materials are used in kindergarten and the first six grades, and one unit each for junior and senior high school. Units contain about ten lessons for each level. Elementary grades receive five hours of instruction (20-30 minutes each day for two weeks), while junior and senior high school lessons require 45-55 minutes of instruction each day for two weeks, totalling nine hours of instruction. Units are taught by classroom teachers with minimal in-service training.

Outcomes and/or Recommendations:

- Results of evaluation of Project CHOICE show effectiveness in three areas: knowledge about cancer, attitudes, and locus of control. (These terms were not defined in the article.)
- Author's conclusions:
  1. Cancer education is poorly integrated within the school curriculum.
  2. Inadequate content and instructional time are devoted to preparing students to cope with change, to understand new information, and to act and react intelligently to new information.
  3. Emphasis is lacking concerning the role of the media, the government, and other agencies in cancer control and their positive and negative contributions.
  4. There is insufficient information to understand fully the role of social support mechanisms which affect students.
  5. Little information is given students regarding the role and importance of parental occupational and family history on certain types of cancer.

- Author's recommendations:
  1. Future efforts must clearly present typical preventive measures for cancer which are within one's control, and stress self-examination procedures and the importance of seeking medical assessment early.
  2. Teacher education and school nurse education must play a more active role in cancer prevention and control.
  3. Students should become knowledgeable regarding family and occupational history in cancer control.
  4. School districts should provide a comprehensive and coordinated cancer education and prevention curriculum, involving several disciplines, for example, science, home economics, physical education, and health.
  5. New curricula should emphasize the relationship among risk factors, appropriate medical screening, and self-examination techniques.
  6. Additional research should be conducted to understand the knowledge, attitudes, and beliefs of children regarding cancer and its control.

57. **Putnam, Georgia, and Karen Yanagisako. "Skin Cancer Comic Book: Evaluation of a Public Education Vehicle," Cancer Control Unit, Community Cancer Program of Hawaii, 1236 Lauhala Street, Honolulu, Hawaii 96813. 1982.**

Subject:
A 16-page comic book developed as part of a multimedia education campaign designed to improve skin cancer knowledge and prevention/detection behavior is described and evaluated. The comic book, entitled "The Incredible Adventures of the Howzit Family," was designed so that readers would: (1) be able to identify risk factors for skin cancer; (2) apply sunscreen lotions of SPF 8 or higher prior to exposure to the sun, and (3) avoid unprotected exposure to the sun, especially between 10 a.m. and 2 p.m.

Target Audience:
Caucasian households in one community in Hawaii.

Channels of Communication:
Support media.

Sponsoring Agencies and Cost:
The Community Cancer Program of Hawaii. Cost information was not provided.

Time Period:
December, 1980 - October, 1981.

Methodology:
A predistribution survey included 318 interviews conducted prior to the distribution of the comic books. A postdistribution survey was conducted with 304 respondents four months after the comic book was mailed to households in the Kai neighborhood. Door-to-door interviewing for both surveys was done by local research firms. In general, the following types of data were collected: socio-demographic background, skin cancer knowledge level, personal practices related to prevention/detection, and sources of skin cancer information.

Outcomes and/or Recommendations:

- o 44.7% of the respondents remembered receiving the comic book.
- o 90.4% of those recalling the comic, said that at least one member of the family had read the comic book.
- o Caucasian respondents, reporting incomes above $35,000, and respondents educated at the graduate level tended to have read the material.
- o Findings support the idea that the comic book was effective in changing knowledge and behavior of its readers. 30-45% of the readers reported that they had made conscious behavior changes in regard to sun exposure, sunscreen use, skin self-examination, and use of protective clothing. Readers scored higher on knowledge questions than nonreaders.
- o Because only 44.4% of the residents recalled receiving the comic book (despite a free mailing to each household), perhaps another means of distribution, for example, by informed volunteers, may provide better results).

58. **Lorig, Kate, and Esperanza Garcia Walters. "Cuidaremos: The HECO Approach to Breast Self-Examination," International Quarterly of Community Health Education, Vol. 1, No. 2, 1980-81.**

Subject:
In an attempt to increase Breast Self-Examination (BSE), a health education-community organization strategy was developed and implemented utilizing Latin opinion leaders in the production of a film and training of their friends and neighbors in Santa Clara, California.

Target Audience:
More than a thousand Latina women.

Channels of Communication:
Interpersonal education and support media.

Sponsoring Agencies and Cost:
Santa Clara County American Cancer Society; funding by the Macomber Legacy, California Division, American Cancer Society. Cost information was not provided.

Time Period:
Six weeks.

Cost:

Methodology:
The HECO approach (Health Education-Community Organization) includes 7 steps:

1. Identification of a problem - through a community-wide needs assessment.
2. Opinion Leader Identification - Each Chicana on the special Populations committee was asked to name five or ten Chicanas whom they felt might be health opinion leaders. These people were contacted and those interested were asked to list additional leaders, etc. From the 300 or more women contacted, the 80 persons whose names appeared more than twice were asked to be opinion leaders.

3. Community Survey - This step was the development and implementation of a survey on community attitudes, beliefs, and practices about cancer. For example, most women preferred to be advised by female physicians.
4. Media Production - A videocassette (in both 8 mm. and 16 mm. films later) reflecting the community norms and values of Chicana women was produced. The film is in both Spanish and English with subtitles and consists of women talking about health, health care providers, cancer, their fears and experiences, and an example of a woman examining her breasts.
5. Training of Community Facilitators - 40 Spanish-speaking women completed between 12 and 18 hours of training to conduct self-breast examination classes in the community. Many were opinion leaders and others were enrolled in community health work programs at local community colleges. Training included: (a) information about cancer, and specifically breast cancer and self breast examination; (b) information on how to conduct a community class; (c) identifying and discussing community resources, such as the American Cancer Society, the local health department, sources of free or low-cost pap tests, etc.; and (d) instructions on how to form a self breast examination class.
6. Giving Community Classes - Facilitators were given information on forming and giving their own classes, and then did so.
7. Evaluation - Before the classes women were asked to complete a card for obtaining baseline data regarding their practice of breast self-examination, cervical screening, etc. Six weeks after having attended a course, these same women were contacted by phone and asked questions about practicing self examinations and having pap smear tests.

Outcomes and/or Recommendations:

o The numbers of women in the target community conducting self-examination of the breasts increased from 30% to 76%.

59. **Charlton, Anne. "An Evaluation Study of Two Different Approaches to Teaching about Cancer in Secondary Schools," Reported in the International Journal of Health Education. Available from Manchester Regional Committee for Cancer Education, Kinnaird Road, Manchester M20 9QL, U.K.**

Subject:

This evaluation stems from fact-finding studies about cancer and cancer education among secondary school pupils in Great Britain and their teachers. Directive and supportive teaching methods were used in the curriculum. Directive methods involve the teacher giving information by talking, followed by student discussion. Supportive methods involve the pupils setting the direction of the study and the teacher guiding the discussion and giving advice.

Target Audience:

Pupils aged 14 years and over, of mixed abilities.

Channels of Communication:

Formal school system.

Sponsoring Agencies and Cost:
Manchester Regional Committee for Cancer Education, funded by a grant from the Cancer Research Committee. Cost information was not provided.

Time Period:
Over a five-week period.

Methodology:
Lessons were of different kinds, each lasting 80 minutes, the standard length for science and environmental studies lessons for pupils of this age. Lessons were taught to each class during normal lesson time by their usual teachers. Classes were as follows:

Group I: Biology: This lesson consisted of facts about cancer, its treatment, and cures. Materials were color slides and accompanying worksheets. Additional written work accompanied the lesson. Some exercises included sentences about each slide which had key words missing. These words were to be filled in during the slide presentation. A crossword puzzle was also included.

Group II: Social or Environmental Studies: This lesson involved less formal teaching than the biology lesson. Worksheets for the pupils described the progress other pupils had made. All aspects of health were included, with many statistics, graphs for interpretation, and multiple choice questions. Students could use materials in their own way. The lesson included information on cancer, but was not entirely about this disease.

Group III: Control Group: No lesson about cancer was taught to these groups.

Outcomes and/or Recommendations:
The week prior to the lessons, students were given a pre-test as to: (1) their attitudes, ideas, and feelings about cancer; (2) their knowledge about cancer, and (3) the Eysenck Personality Inventory, Form B, to assess their personalities regarding extrovert/introvert and stable/neurotic. A month after the classes, the post-test was given.

A small general increase in general awareness about cancer, plus significant increases in the knowledge that cancers are sometimes curable and that earlier treatment increases the chances of being cured came from the biology lesson. Attitudes did not seem to be changed by the two experimental programs.

60. Christmas, Pat, and Sally Nichols. "'Don't Take a Chance': A Public Campaign to Encourage the Early Reporting of Breast Symptoms", Health Education Journal, Vol. 41, No. 2, 1982.

Subject:
This article reports all aspects of the preparation and implementation of a campaign to encourage the early reporting of breast symptoms in Southampton, England. The primary aim of the campaign was to reduce the delay in reporting breast cancer symptoms.

Target Audience:
All women in Southampton, England.

Channels of Communication:
Support media, mass media, and inter-personal education.

Supporting Agencies and Cost:
Community Medicine, University of Southampton and Southampton Health Education Service. Total cost of the program was 1000 pounds.

Time Period:
One year -- 1981.

Methodology:
The program may be divided into four areas:

1. Preparation - This included preparing posters, pamphlets, displays, and aids for speakers, preparing press releases and selecting radio and television speakers, briefing volunteer speakers and introducing materials, mailing the schedule of speakers to all women's groups and industries organizing advertisements and invitations, organizing a staff to prepare department store displays, and mailing/delivering posters and pamphlets to display sites.
2. Materials - Four types were used: posters and pamphlets; a tape/slide program which described both benign and malignant breast diseases and their treatment, provided national and local statistics and included interviews with patients and a general practitioner; a rolling display consisting of 13 revolving panels of information about breast cancer; and 1500 invitation cards advertising the public meeting.
3. Events - Radio programs announcing the campaign, plus a 30 minute program on breast cancers; a five and a half minute film on regional television news on the opening day of the campaign; newspaper coverage, hospital staff education, university staff education, shop window displays, a public meeting in the second week of the campaign, and 27 talks given at various women's groups meetings during one month of the campaign.
4. Posters and pamphlets delivered to every general practice surgery in the area, plus other health and industrial locations.

Outcomes and/or Recommendations:

- The campaign is currently being evaluated on three measures: changes in patient reporting practices, general practitioner consultations about breast irregularities, and changes in knowledge and attitudes about breast cancer.

61. **Antonovsky, H. F., et. al. Breast Examinations: Routine Service in the Primary Health Care Clinic.** International Journal of Health Education, Vol. II, December, 1983/4, pp. 6-12.

Subject:
How to encourage breast examinations.

Target Audience:
Israeli women over 30, middle class, of a high level of education, and almost all working outside the home.

Channels of Communication:
Direct communication through the family physician.

Implementing Agency and Cost:
Information not provided.

Time Period:
Information not provided.

Methodology:
Self-examination of breasts was encouraged by the family physician making breast examination a regular part of all health clinic visits on women over 30. The doctor also instructed women on how to examine themselves and instructed them to do so monthly.

Outcomes and/or Recommendations:
In looking at this group and a control group it seemed that the introduction of routine breast examinations in primary health care clinics had a clear impact on the frequency of breast examinations. Three factors that seemed to be related to the frequency of examination are: (1) thinking about the possibility of getting cancer; (2) ever having asked for an examination, and (3) frequency of utilization of health services.

62. **Bazas, T.**; Harrington, J.M. **Evaluation of an Accident Prevention Campaign in a Major Greek Industry.** International Journal of Health Education, vol. 24, no. 2, 1981. pp. 118-21. bibl.

Subject:
A program to reduce occupational accidents in a spinning mill of a Greek cotton company. An example of a well organized workplace campaign.

Target Audience:
One hundred forty production workers who chose to participate, out of a potential 600 employees at one of the company mills.

Channels of Communication:
Support materials including a booklet, articles in the company newspaper, posters, and a company physician and social worker.

Supporting Agencies and Cost:
Not given. T. Bazas is a member of the Health Planning Section, Ministry of Social Services, Athens, Greece; J.M. Harrington is director of the Institute of Occupational Health, University of Birmingham, England. Cost not given.

Time Period:
Two months. No date given.

Methodology:
The pretest of workers' knowledge was administered as a competition with prizes. Items concerned dangerous occurrences in mills and accident prevention. A company physician and social worker then urged all workers to read the materials--a humorously illustrated booklet on accident prevention, and related articles in the company's newspaper. At the end of two months, they asked those who had taken the pretest to take the test again and indicate whether they had read the book and/or the articles. For evaluating results, the authors grouped workers in terms of the amount of material each had read.

Outcomes and/or Recommendations:
The measure of results was change in number of items on dangerous job situations and accident prevention answered correctly from pretest to posttest. Numbers of correct answers increased in the group that read both the booklet and the articles, and the authors conclude that the campaign increased the knowledge of workers motivated enough to read most of the relevant information. They list as important campaign factors: carefully designed content, tailored to the target group, and encouragement by health personnel who have good relationships with the workers. They note the desirability of further evaluation to examine the retention of information and the change in accident rate.

63. Fergusson, D.M.; Horwood, L.J.; Beautrais, A.L.; Shannon, F.T. A Controlled Field Trial of a Poisoning Prevention Method. Pediatrics, vol. 69, **no. 5, May 1982, pp. 515-520.**

Subject:

Prevention of accidental household poisoning of young children. An example of a campaign that did not succeed, perhaps because it placed unreasonable behavioral expectations on its targeted change agents (young children).

Target Audience:

Children two and three years old from 1,145 families. Experimental group N=599, control group N=557. This sample represented 92% of a birth cohort of infants born in Christchurch, New Zealand, between April 15 and August 6, 1977.

Channels of Communication:

Support materials including leaflets for the mothers, given out at the time of an annual interview, and "Mr. Yuk" labels for household poisons.

Sponsoring Agencies and Cost:

The Christchurch Child Development Study, Department of pediatrics, Christchurch Clinical School of Medicine, Christchurch, New Zealand. Cost not given.

Time Period:

One year.

Methodology:

This field trial tested "Mr. Yuk" labels as a way to prevent young children from ingesting hazardous substances. Developed by the National Poison Center in Pittsburgh, United States, Mr. Yuk is a self-adhesive label that shows a green-faced grimacing man with a protruding tongue. Mothers in the experimental group were given leaflets on how to introduce Mr. Yuk to a child, a list of household products to be labelled, and Mr. Yuk stickers. Control group mothers did not receive these materials.

Outcomes and/or Recommendations:

Comparison of poisoning rates in experimental and control groups showed no significant difference. During the year at least 63 poisoning incidents occurred in the experimental group. Having gotten very favorable parent reactions to Mr. Yuk as a method, the authors sought an explanation for the disparity between positive parental reactions and unimpressive results. They found three factors: parents did not label all poisons; in a significant number of cases, poisoning occurred with substances, such as garden plants, that could not be labelled; in a minority of cases, children took poison from a labelled container. The authors conclude that Mr. Yuk labels are not effective for two and three year-olds, but might be effective as part of an integrated campaign or with older children.

64. **McLoughlin, E.; Vince, C.J.; Lee, A.M.; Crawford, J.D. Project Burn Prevention: Outcome and Implications. American Journal of Public Health, vol. 72, no. 3, March, 1982, pp. 241-247. bibl.**

Subject:
Reduction of burn incidence and severity of injuries. An example of a campaign whose impact may have been diminished by its dissemination of too many messages.

Target Audience:
Community adults, and secondary and elementary school students in the Boston Standard Metropolitan Statistical Area (SMSA) (population 2.5 million).

Channels of Communication:
Mass media and interpersonal education: television spots, television and radio talk shows, newspaper articles, posters, booklets; additional group education sessions for two communities.

Sponsoring Agencies and Cost:
Collaboration among Education Development Center, Massachusetts General Hospital, National Fire Prevention Association, and Shriners Burn Institute. Cost not given.

Time Period:
Eight months. Date not given.

Methodology:
Mass media messages on prevention and control of burns were delivered throughout the Boston Massachusetts Standard Metropolitan Statistical Area (SMSA) via channels listed above. The town of Quincy received additional intervention through presentations for adults at community agencies, and the town of Lynn through school presentations for students. The control area, the Springfield SMSA and two of its communities, received no educational intervention.

Outcomes and/or Recommendations:
Knowledge gains were shown only in the school program. Burn incidence and severity were not reduced by the general campaign or the school program; the community intervention may have brought about a moderate, temporary reduction in injuries. One reason proposed for the failure of this and other mass media campaigns is "attenuation of effect," i.e., there are many steps between message delivery and behavior change, and a percentage of the population is lost at each step (e.g., only a percentage of the total population is exposed to the message, of those exposed only a percentage comprehend the message, etc.). A second problem for this campaign is seen as the multiplicity of messages: nine precautionary behaviors on a range of hazardous situations were advocated. In contrast, two successful burn prevention campaigns were highly focused --the British Chip Pan Fire campaign focused on preventing burns from flaming grease in chip pans, and the smoke detector campaigns focused on detecting fires early. The authors conclude that to control burn injuries, education for personal responsibility is not enough, and that product modification and environmental redesign must be effected through education and legislation.

65. **Nau, P.A.; Van Houten, R. The Effects of Prompts, Feedback, and an Advertising Campaign on the Use of Safety Belts by Automobile Drivers in Nova Scotia.** *Journal of Environmental Systems*, vol. 11, no. 4, 1981-82, pp. 351-361. bibl.

Subject:
A largely unsuccessful media campaign to increase safety belt use in automobiles in Nova Scotia, Canada.

Target Audience:
Automobile drivers. Province-wide in Nova Scotia for the advertising campaign; four major highways in Halifax and Dartmouth for the highway sign research.

Channels of Communication:
Mass media, including newspapers, radio, and television, and, in a separate research project, highway signs.

Sponsoring Agencies and Cost:
Department of Highways, Province of Nova Scotia, Canada. Cost not given specifically; annual Province budget of Nova Scotia for advertising safety belt use in the year of this campaign was $68,750.

Time Period:
One year, April 1979 - April 1980, for the mass media advertising campaign; seven to fifteen measurement sessions for the highway sign study, which started in July 1979.

Methodology:
The research component of this study was based on a previous study by the authors that showed that a large highway sign displaying the percentage of drivers not speeding during the preceding week, along with the best record to date, was effective in reducing the percentage of speeding drivers by as much as two-thirds. This study was designed to test whether, and on what type highway, reminder signs and "feedback" signs (signs reporting what percentage of drivers wore safety belts the preceding week) would influence drivers to use safety belts. Following a baseline measurement period, signs were erected on four different type highways. Each type of sign (reminder and feedback) was erected on two different types of highway: one, a four-lane highway leading out of the city and into high-speed zones, the other, a two-lane highway through residential and business areas. The percentage of drivers wearing safety belts was measured by a roadside observer. In a year-long advertising campaign to promote use of safety belts, instituted three months before the highway sign study began, newspapers, radio, and television were used to deliver messages on safety belt use.

Outcomes and/or Recommendations:
In the highway sign study, only one condition led to an increase, a marginal one, in safety belt use: when the sign was the feedback sign and the highway was leading out of the city into a high-speed zone. The mass media advertising campaign was ineffective in increasing safety belt use, and the authors

note that several previous studies have found other safety belt advertising campaigns ineffective.

66. **Campbell, B.J.; Hunter, W.W.; Gemming, M.G.; Stewart, J.R.** **The Use of Economic Incentives and Public Education to Increase Seat Belt Use in a Community.** **University of** North Carolina **Highway** Safety **Research** Center, March, 1984. **98 p. bibl.**

Subject:
A successful incentive-based campaign to increase safety belt use in automobiles in North Carolina.

Target Audience:
Automobile drivers and passengers in the towns of Chapel Hill and Carrboro, N.C., USA.

Channels of Communication:
Mass media: newspapers, radio, and cable television.

Sponsoring Agencies and Cost:
The Village Companies, the Governor's Highway Safety Program, the General Motors Corporation, University of North Carolina Highway Safety Research Center. Cost not given.

Time Period:
Six months, three weeks, April-December 1983.

Methodology:
Noting that public information programs have had little effect on safety belt use, but that research suggests that economic incentives could be effective, the North Carolina Highway Safety Research Center designed a six-month campaign that combined economic incentives and public education, and titled it, "Seat Belts Pay Off." In a preliminary three-week period, messages giving reasons for seat belt use were delivered in newspaper advertisements and radio and cable television public service announcements. In the following six-month incentive phase, well publicized through the same channels, vehicles were stopped at random and belted occupants were given a small prize (value $3-5) and a chance for a large cash prize. Prizes were donated by numerous businesses, clubs, and foundations in the community.

Outcomes and/or Recommendations:
The campaign succeeded in increasing safety belt use from a baseline of 24% (already higher than the national average of 14%) to 41% in the final campaign week. Authors offer as other indications of success the support given by local business and media and the enthusiasm of citizens, and they attribute the success to the principal of giving positive recognition to people's efforts. The campaign was not as successful as hoped in persuading organizations to adopt safety belt policies. The authors note the importance of determining whether gains are permanent; previous studies in "closed settings," such as corporations, have shown slippage but some residual gain. They cite as the major threat to success: insufficient visibility, resulting

from too few incentives and a lack of publicity continuing throughout the campaign. The report is written in detail that facilitates replication of the campaign, and includes descriptions of other documented incentive safety belt programs in closed settings.

67. **Wolfe, A.C.; O'Day, J.** **Evaluation Report on the 1979-1983 Oakland County Alcohol Enforcement Education Project.** **The University of Michigan Transportation Research Institute, July, 1984. 65 p.**

Subject:
Reduction of alcohol-related traffic accidents. A good example of how an educational campaign can change attitudes but not affect related behaviors.

Target Audience:
Automobile drivers and their friends. County-wide in Oakland County (population over one million), the largest suburb of Detroit, Michigan, USA.

Channels of Communication:
Mass media: newspapers, television, and billboards.

Sponsoring Agencies and Cost:
Michigan Office of Highway Safety Planning. Traffic Improvement Association of Oakland County. $1,260,000 for total "campaign," much of which included increased law enforcement; $320,000 of the total for education and evaluation.

Time Period:
Four years, 1979-1983.

Methodology:
This project had three goals: increasing the drunk driving arrest rate, increasing public awareness of both the drinking-driving problem and the stepped-up enforcement, and lowering the rate of alcohol-related accidents. Campaign activities included police training; deployment of extra patrol cars at common times for alcohol-related accidents; and public information messages informing the public of the dangers of drunk driving, of the newly increased chance of apprehension, and of what to do if you or a friend has drunk too much to drive.

Outcomes and/or Recommendations:
Comparing the 1980-83 period with a 1979-80 baseline, the evaluation found the project successful in both increasing the drunk-driving arrest rate (it nearly doubled) and increasing public awareness of the drinking-driving problem and stepped-up enforcement. The program had no substantial effect on lowering the rate of alcohol-related accidents. The authors conclude that the study offers no evidence that the levels of enforcement and education used in this program lower the incidence of alcohol-related traffic accidents. Since there was an increase in the proportion of people who consider drunk driving the most important cause of traffic death and injury, and in the proportion who consider drunk driving the most important violation for the police to concentrate on, this study presents a good example of changing public attitudes without changing behavior.

68. Mothers Against Drunk Driving (MADD), Information Packet, MADD, 669 Airport Freeway, Hurst, Texas, USA.

Subject:
Reduction of alcohol-related traffic accidents, and improvement of supports for victims and their families. An example of how non-governmental organizations can successfully develop and implement educational campaigns to reach their objectives.

Target Audience:
The general public in the U.S.A. and Canada.

Channels of Communication:
Mailings, speakers, workshops.

Sponsoring Agencies and Cost:
MADD is a grassroots organization with branches in the U.S.A. and Canada whose work is funded by individual public donations. Cost not given.

Time Period:
Ongoing since 1980.

Methodology:
MADD's goals are "to create a major social change in the attitude and behavior of Americans toward impaired driving," legislation of a higher drinking age and of sciffer penalties for drunk drivers, and improved supports for victims and their families. Public awareness and education activities include extensive mailings, a speakers bureau, workshops on legislative action, materials for the public on such topics as party planning and reporting drunk drivers, and youth education programs.

Outcomes and/or Recommendations:
While MADD's campaign has not had traditional evaluation, it is included in this bibliography because of its size and apparent impact. Measurements of effect include the size of the organization membership itself, and legislation passed. Since 1981, 315 chapters have been established with two new ones being chartered weekly, affiliated youth programs have been established in almost every state, over 360 drunk driving laws have been enacted, and the United States Congress passed a bill that penalizes states with a drinking age under 21 and rewards states with mandatory minimum sentences for drunk driving.

69. Swinehart, J.W. A Descriptive Review of Selected Mass Media Campaigns on Highway Safety. Public Communications Resources, Inc., Pelham Manor, New York, June, 1981. 122 p. annotated bibl.

Subject:
A survey of campaigns directed at increasing highway safety; specific campaigns address such subjects as: safety belts, drunk driving, compliance with a 55 mph speed limit, bicycle safety, and motorcycle helmet use. This study includes an annotated bibliography of 67 campaigns and studies that took place from 1962 to 1980 in countries including Australia, Canada, Finland, Sweden,

and the United States; and it examines twelve campaigns, selected to provide a range in scope, sponsor, level of effort, and technical approach.

Sponsoring Agencies and Cost:
U.S. National Highway Traffic Safety Administration. Cost not given.

Outcomes and/or Recommendations:
This report explores campaign elements associated with success and makes numerous recommendations for highway safety campaigns, the preparation of mass media materials, and topics for further research.

70. **Nichols, J.L.** Effectiveness and Efficiency of Safety Belt and Child Restraint Usage Programs. National Highway Traffic Safety Administration, March, 1982. 113 p.

Subject:
A comprehensive survey of methods for increasing safety belt use (including child restraints), this study examines five major methods: public information (mass media) programs, education programs, incentive programs, organizational policies requiring safety belt use while on official business, and legislation. The report gives several detailed examples of each method and its results, drawing on the experience of countries including Australia, Canada, the United Kingdom, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the U.S.A., and the Federal Republic of Germany. The report contains a great deal of background information and recommendations for public information campaigns.

Sponsoring Agencies and Cost:
U.S. National Highway Traffic Safety Administration. Cost information was not provided.

Outcomes and/or Recommendations:
This report finds that public information campaigns are not dramatically successful when they are used as a sole approach and when their duration is brief. However, the author points out that long campaigns combined with other approaches (the U.K. has run a campaign every year for six weeks per year) have generally doubled or tripled usage rates, bringing them up to over 30%; have made possible, through public attitude change, the passage of safety belt legislation; and are deemed unsuccessful only in comparison with the more dramatic changes achieved after legislation is passed. Incentive programs have not been used frequently, but they have the potential of significantly increasing the impact of other programs. Usage rates of 25-40% have been achieved with a fully implemented voluntary safety belt use effort; legislation after such voluntary efforts has increased belt usage 50%.

71. **Ross, H.L.** Deterrence of the Drinking Driver: An International Survey. National Highway Traffic Safety Administration, March, 1981. 121 p. bibl.

Subject:
This report surveys legislation and experience in a range of countries on drinking-and-driving to determine what is known about the impact of

legislation on behavior. Countries surveyed include Australia, Austria, Canada, Czechoslovakia, Denmark, France, Finland, the United Kingdom, New Zealand, Sweden, the U.S.A., and the Federal Republic of Germany. Focus is on the Scandinavian model, which defines drinking-and-driving offenses in terms of exceeding a prescribed blood alcohol concentration, and which is designed to give the impression of relatively certain, severe, and prompt penalties.

Sponsoring Agencies and Cost:
U.S. National Highway Traffic Safety Administration. Cost not given.

Outcomes and/or Recommendations:
Findings are not optimistic: legislation may at first reduce drinking-and-driving, but the effect is not lasting. Public perception of the certainty of punishment must be kept high for behavior to continue to be affected. (Messages about intrinsic dangers of drinking-and-driving are not addressed by this study.) Concluding that "it is possible that further research will find that no tolerable level of enforcement can produce permanent improvement," the author suggests that it would be productive to see the ultimate task not to be that of preventing drinking-and-driving but to be that of reducing death and damage due to crashes. Efforts based on such a change, the author reasons, would eschew more severe legislation and would work, rather, for a safer enviroment for drunks to drive in (sturdier cars, safer highways)--an environment that would also turn out to be safer for drivers who have a heart attack, doze off, fail to see a car approaching, or have sudden mechanical problems.

72. Office of Driver and Pedestrian Research, Existing DWI Enforcement-Oriented Public Communications Themes and Materials. National Highway Traffic Safety Administration, February, 1983. 29 p.

Subject:
This report presents some preliminary findings of a Dynamic Corporation survey of combined law enforcement/public communications strategies for deterring drinking-and-driving. The study reviewed existing public information literature, materials, and activities, and surveyed public communications practitioners for their opinions on public communications channels and messages.

Sponsoring Agencies and Cost:
U.S. National Highway Traffic Safety Administration. Cost information was not provided.

Outcomes and/or Recommendations:
This study found public communication practitioners to believe that an essential element in deterrence is to raise the driving public's perception of the risk of arrest and subsequent penalties. The report provides a description of sixteen communication themes found in existing materials (for example, one is what the arrest experience is like, another emphasizes special equipment for gathering evidence), a selected listing of existing materials that use each theme, and a guide to obtaining the materials.

73. **Smith, G.S. Unintentional Injuries: Intervention Strategies and Their Potential for Reducing Human Losses. A Position Paper for the Carter Center "Closing the Gap Project." Emory University, Atlanta, Georgia, September, 1984.** 113 pp. bibl.

Subject:
Noting that throughout the world unintentional injuries are the major cause of death during half the human life span (age one to 44), this paper surveys the literature on injury control. The term "control" is used rather than "prevention" to include three phases of accidents: pre-event, event, and post-event. The paper introduces the "Haddon matrix" in which each accident phase is considered in terms of three types of factors involved in the occurrence and severity of accidents: human, vehicles/equipment, and physical/social/environmental. Major types of accidents are then analyzed on this matrix to identify the cells in which intervention can be effective.

Sponsoring Agencies and Cost:
The Carter Center, Emory University.

Outcomes and/or Recommendations:
The authors claim that traditional injury control activities that deal almost entirely with the pre-event phase of accidents, and with the human factors in that phase, have had little success. Interventions directed at the event and post-event phases--for example, teaching people to put cold water on burns or to perform Cardiac Pulmonary Resuscitation--are suggested as having more potential for injury control. And, in the pre-event phase, interventions that do not require repeated behavior also have some chance of success; highly targeted programs or ones that require one time-behaviors, such as installation of electrical outlet covers and smoke detectors, have been successful. The most effective interventions, however, are ones that work automatically; for this reason, airbags are more likely to be effective than safety belts in preventing automobile accident injuries. In the United Kingdom, for example, reducing the carbon monoxide content of domestic gas was accompanied by a decrease in both unintentional and suicide deaths from carbon monoxide poisoning.

"Human behavior is an important cause of injuries, but attempts at changing it as a way of controlling injuries have met with little success. . . The usual approach has been through health education programs to encourage interventions that require the regular, active participation of individuals. Thorough evaluations have shown either transient or no effects, and some effects have even been shown to be harmful. High school driver education courses, for example, actually increase the motor vehicle injury rate among teenagers by encouraging participants to get their licenses early. . . . Abolishing driver education has been shown to greatly reduce the crash rates of 16- and 17-year-old drivers."

Authors point to other strategies for affecting human behavior by noting, for example, that in the workplace the risk of injury correlates positively with wage-incentives such as those found in piece-rate work. They contend that educational efforts mixed with other strategies have been most successful. For example, New York City's "Children Can't Fly" campaign reduced fatal falls from windows by combining education with a door-to-door campaign to identify hazards, community organization and involvement, and the provision and installation of free window guards.

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